



THE  
MERCHANTS' MAGAZINE  
AND  
COMMERCIAL REVIEW.

OCTOBER, 1886.

MINES AND MANUFACTURES IN THE MISSISSIPPI VALLEY.

BY J. A. BLAKE.

A trip through some of the leading mining States of the west for the purpose chiefly of recording developments already made, but secondarily of pointing out new fields of promise, has led us at the termination of our travels to combine in one article a review of mining statistics, and from their connection with and almost absolute control of another branch of industry to point out and urge both the facilities and necessities for manufactures in the Mississippi Valley. If we succeed in showing where the chief workable minerals are, how they may be mined and what the profits shall be, what the natural elements of successful manufacturing are, how widely they exist, and what markets they may control, we shall have accomplished our object. The chief mining States of the Mississippi Valley are Missouri, Illinois and Iowa.

Missouri has a total area of 67,380 square miles, making her nine times as large as Massachusetts and one-third larger than New York. This vast area is divided into 114 organized counties, in 80 of which valuable minerals have already been found for the most part in workable and often in inexhaustible quantities. In the absence of any regular scientific survey we are left in doubt whether there is not even better mining territory in the enormous area yet unexplored. Thirty-one valuable minerals have been found. The enumeration is as follows beginning with the most important and extensive; iron, coal, lead, zinc, copper, platina, kaoline, hydraulic cement, nickel, cobalt, metallic paints, emery, plumbago, silver, gold, salt, sulphur, petroleum, silica, granite, marble, fire clay, fire rock, chalcedony, agate, jasper, alabaster, pipe-clay, saltpetre, manganese and tin

The iron ore deposits of Missouri comprise the famous Iron Mountain which with a height of 228 feet and an area at its base of 500 acres it is thought will give for every foot from summit to base an average of 3,000,000 tons of ore; Pilot Knob whose height is 1,118 feet is known to be solid iron to 440 feet below the surface where the base has an area of over 200 miles; and Shepherd Mountain, 660 feet high, a mass of the purest magnetic and specular iron ore. Iron ore has also been found in 36 counties, comprising Butler, Camden, Carter, Christian, Cooper, Crawford, Dade, Dent, Franklin, Greene, Henry, Hickory, Iron, Jasper, Knox, Lafayette, Madison, Maries, Mercer, Miller, Moniteau, Osage, Perry, Pettis, Phelps, Polk, Pulaski, Reynolds, Ripley, St. Clair, St. Francois, Scott, Shannon, Stoddard, Stone and Webster. It has been chiefly worked in Iron, St. Francois and Reynolds counties where the deposits are the largest and among the purest in the world. These three counties are computed to contain enough iron to afford for 200 years an annual supply of 1,000,000 tons. The ore is mostly specular, yields 56 per cent. of pure iron, the product of which is strong, tough and fibrous.

The coal measures in Missouri have been discovered in upwards of 40 counties, lying chiefly along the Missouri and Osage rivers. The most extensive and valuable deposits are in Andrew, Atchison, Buchanan, Holt, Platte, Charlton, Linn, Livingston and Macon counties, which contain about 3,500 square miles of coal lands which average it is said a mean thickness of 11 feet. Prof. Swallow's computation makes out 38,000,000,000 tons of coal in these nine counties. St. Louis county contains 160 square miles of coal territory. The coal strata in Boone and Cooper counties are very rich and extensive. A prominent writer argues that there is enough coal in the State of Missouri to last 3,000 years of 300 working days each if an average of 100,000 tons were mined per day.

The area of lead bearing rocks in Missouri is said to be over 6,000 square miles. They have been found in 38 counties and in more than 500 different localities. The chief deposits are found in Washington, Madison, Jefferson, St. Francois, Franklin, Crawford, Newton and Jasper counties. It is estimated that the mines in Washington, Madison and Jefferson counties alone have since 1840, yielded 100,000,000 pounds. The mines are generally shallow, varying from 10 to 75 feet. The ore is mostly sulphuret and contains from 60 to 85 per cent. of pure lead. Some specimens from Mine la Motte contained 84.50 per cent pure lead and 13.50 per cent. sulphur, a very fine yield considering that perfectly pure galena contains but 86.66 per cent. of lead and 13.34 of sulphur. A lead mining company in Washington county, operating 100 drills and keeping 10 furnaces in blast were rewarded with a net profit of \$369,252 from their last years work.

Copper has been found in 18 counties in Missouri. The best deposits lie along the Meramec Valley in Franklin and Crawford counties, and in Greene County on the unfinished Southwest branch of the Pacific Railroad. The deposits generally lie near the surface, are several feet thick, are in quality sulphuret or carbonate, and yield from 42 to 50 per cent. of pure copper. The Stanton mines in Franklin County have produced ore that by analysis contained 48.41 per cent. of pure copper. A very promising copper region has been traced along the headwaters of Current, Black and St. Francois rivers, chiefly in Shannon, Wayne and Madison counties. The Copper Hill mine has yielded 100,000 pounds.

The specimens of zinc discovered and analyzed in Jackson, Madison and Washington counties, of kaoline in Bollinger and Iron counties; of petroleum in Carroll, Cass, Ray and St. Charles; of nickel in Iron and Madison; of alabaster in Washington and Franklin; of fire-clay in Marion and Bollinger; of saltpetre in Pulaski and Gasconade; of silver and gold in Washington, Madison and Iron; of platina in Iron; cobalt in Washington; pipe-clay in Marion, and emery in Iron counties, warrant the assertion that many if not all of these minerals exist in great purity if not in paying quantities.

Illinois has an area of 55,409 square miles, nearly as large as all New England. She is the richest agricultural State in the Union, and yet one-fifth of her entire area is mineral territory. Coal, lead, gypsum, silver, gold, petroleum, iron, salt, copper, zinc, freestone, lime and silver have been found. We have in a former communication spoken at length of the location, extent and quality of these minerals. It will be sufficient for the purposes of this communication to present a few statistics. The Illinois coal field is estimated by Prof. H. D. Rogers to contain 1,277,500,000,000 tons. The Pennsylvania coal field contains 316,400,000,000 tons. All the coal fields of North America, 4,000,000,000,000 tons. The coal fields of Great Britain contain 190,000,000,000 tons. The Illinois coal measures, then, contain four times as much coal as those of Pennsylvania, nearly one-third as much as all those of North America, and over six times as much as all the coal fields of Great Britain. It will take 100,000 years to exhaust them. The prominent seams are the Belleville and La Salle, occupying the southern and middle parts of the State. Mining is now chiefly carried on in St. Clair, Madison, Randolph and La Salle counties. The present annual product of the entire State is about 1,500,000 tons. St. Louis, Chicago, the markets of the Upper Mississippi, and the home consumption are supplied mainly or in part by Illinois coal. Last year Southern Illinois sent 10,000,000 bushels of coal to St. Louis markets, of which the St. Louis, Alton and Terre Haute carried 6,000,000, and the Ohio and Mississippi road 4,000,000 bushels.

There are three staples in which Illinois is singularly "strong." We mean wheat, coal and lead. If she is not first in the former, she certainly is in the latter. For 20 years the entire lead product of the country has come from the famous Galena mines in Jo Davies' County, which, with judicious and regular working, would have been not only amply sufficient to shut off any foreign demand, but even to create a foreign market. A few mines circling Galena have supplied and smelted 15,000,000 pounds a year. The great Galena lead district occupies a portion of three States, extending East and West 87 miles, and North to South 54 miles. This belt includes 62 townships in northwestern Wisconsin, 8 in eastern Iowa, and 10 in northern Illinois. The portion included in Wisconsin and Illinois is directly accessible to Galena, and is called the "Galena Mines." This district has an area of 1,000,000 acres. The ore has been struck in every direction all over this great field. The lead is found in horizontal veins, varying from half an inch to ten inches in thickness. It is sometimes found in solid masses of great weight. The average of pure lead in the ore is about 70 per cent.

Iron has not been extensively worked in Illinois, though it exists in workable quantities. It abounds in the northern part of the State. In

Hardin County, on the Ohio, large deposits have been found. Several furnaces are in operation. In Monroe and Randolph there are said to be extensive deposits of iron ore. About four miles north of Jonesboro, in Union County, and two and a half miles west of the Illinois Central Railroad, there is a ridge rising abruptly to the height of 200 feet, called Lion Mountain. The base of the hill, for 50 feet or more, consists of fossiliferous shale intermixed with masses of hematite iron ore.

The best qualities of silex for glass manufacture are found in Alexander and Pulaski counties; salt in Hardin, Saline, Effingham and Pope counties; petroleum in Clark, Livingston and La Salle; copper in Monroe, Fulton, Rock Island and Jo Daviess; crystalized gypsum in St. Clair; quartz crystal in Gallatin; gold in Jo Daviess and Fulton; and Silver in Stevenson county.

Iowa has a total area of 55,045 square miles, nearly the size of Illinois. Her area has not been ascertained. The State has not seen fit to order a geological survey. But from what appears on the surface of the country merely, is sufficient evidence of very great mineral wealth. Lead, coal, copper, hydraulic limestone, and iron have been found. Her coal field is very extensive throughout the valley of the Des Moines. Lead is abundant in the North east; copper along the river opposite Jo Daviess county, Illinois; and hydraulic limestone in several of the central counties in the valley of the Des Moines.

We wish in the light of facts now presented, to argue the advantages that these rich mineral areas afford for manufactures. Were coal a prime necessity for all classes of manufactures it could not have been more lavishly supplied than in the great coal fields of Southern Illinois which with rail and water facilities the very best, can easily and cheaply supply the upper and lower Mississippi and their tributaries reaching to points central in all the states of the valley. The English processes of coking already being used in this country will make the Illinois coal excellent for all kinds of iron manufacture, and its nearness to the great Iron region of Missouri, Illinois, and Iowa render it easily available, so that no places possible could be better adapted for extensive and economical manufactures than the very mines where these rich metals are found. Is there any reason why capitalists should not swarm to the Iron Mountain regions of Missouri and make every acre a net work of forges, furnaces, rolling mills and rail factories. There is the best iron that manufactures have yet found, except perhaps the Lake Superior, and further developments may bring out still richer deposits. There is your Belleville coal seam, exhaustless, only a few miles away, with railroads stretching from mine to mine. There are the lead, copper and zinc ore very valuable deposits of which are found singularly enough right within the circuit of the Missouri coal measures. Is there not a market for manufactured commodities? The great Mississippi Valley from source to mouth, the valley of the Missouri, the new mining States of the far West and the whole Pacific coast is urging such an enterprise. The great expense of all classes of manufactured goods in the West is caused by the long and difficult transportation from the East. There is no reason why Missouri should not become as essentially a manufacturing State as Pennsylvania. We mean not merely in the important field of iron, steel, and hardware manufacture, but her valleys abound with streams for water power and



her liabilities with coal for steam power for all possible qualities to any possible extent of any conceivable kind of usual manufacture. St. Louis is the great distributing centre for all the West and South West. Why should she not become the great manufacturing centre too and not be put to the questionable profit of retailing to the markets she controls, Pittsburg and Cincinnati, iron, steel and glass wares made from minerals that she herself furnished! Southern Illinois is taking strides in cotton and tobacco growing. Should they not form the basis for abundant water and steam manufactures. Should not the great Galena lead district be a net work of rail lines to the La Salle coal measures, and all her rich acres, be honey-combed with mines circled on every side with smelting furnaces. Has not all this field lines of quick transit for their commodities and marketable demands at home and abroad? Thread the Des Moines river with furnaces, factories, and mills from source to mouth and what the mines do not contribute the wood lands and prairies will, to vast and profitable manufactures. There are coal measures rich and exhaustless traversing Missouri, east and west, extending by double lines from the Breckenridge and Grayson coal measures in Kentucky through all central and southern Illinois and onward through the great valley of the Des Moines. There are vast beds of iron ore, lead, copper, zinc, woodlands of oak, elm and ash and vast prairie lands of the best grain and cereal products. There is fuel enough to convert all these ore deposits into hardware, the forests into wooden ware, and the wheat fields into flour, if there were a hundred mines and a thousand miners for every square mile of coal, a continuity of furnaces and rolling mills along every vein of iron, lead or copper ore, factories and saw mills for every cluster of oaks, ash, and elms, and a flouring mill to every acre of wheat.

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### THOUGHTS ON THE CURRENCY.

BY JOHN NESMITH.

Assuming, as I think we may, that a paper currency must be used, the question to be settled by Congress is whether we shall continue the use of legal tender notes, or return to the use of bank promises. In the decision of this question, it may be well to compare the advantages and disadvantages of each, rather than to jump to the conclusion that we *must* return to the old system of using bank issues, and that the only thing to be settled is *when* we shall return.

A good currency, to be established by law as a legal tender or measure of value by any country, should be fixed and unvarying, a given amount of it always representing the same quantity of property, the condition of property remaining the same. To secure such a standard, two things seem to be essential:

First.—The amount in use must remain the same at all times; and

Second.—The standard itself should be unchangeable in value.

That the exchangeable value of a currency increases or diminishes in proportion to the amount in use, will not be disputed. It is also equally evident that when an article of merchandise is made the legal measure of value, it will cease to be used as currency whenever its legal value is below its real value as a product of labor; for it will pass out of the

country as undervaluing it. The difficulty arising from the use of any article of commerce as a standard of value, is simply that we give it an arbitrary value without being able to divest it of its real value as a product of labor. This real value is constantly changing, according to the laws of supply and demand, and is therefore continually unsettling and disturbing the movements of the currency. The difficulty arising from this cause when gold is taken as a standard value, is greatly modified by the fact that all American and European countries have given to it nearly the same legal value, thus equalizing its arbitrary price over a large part of the commercial world. This does not, however, relieve it from the embarrassment arising from a constant fluctuation in the quantity circulating in the country adopting it as its standard, but rather increases the demand for it as an article of export, making it the first article used in the settlement of balances, whenever an excess of importations has created a balance against the country.

If we must take an article of merchandise as a standard, gold is undoubtedly the best one we can take. But no legislation can prevent it from being among the first articles taken from the country in payment for importations, and thus disturbing the currency. If we make gold the measure of value, and allow banks to circulate as currency their promises to pay, redeemable in gold, the actual currency of the country will be bank promises; and what gold there is in the country will be in bank vaults, there being in circulation at least four dollars in paper for every dollar in gold held by the banks. In the cities, the proportion of gold will be greater; but in the country the proportion will be much less. In large extents of territory, the banks will not hold one dollar in gold to ten dollars of the bills they will have in circulation. With such a currency, it is easy to imagine what a state of things must exist whenever an unusual shipment of gold takes place. And every old merchant has experienced the unpleasant sensation of having bank accommodations withdrawn when his bills receivable were returned protested.

Here lies the radical difficulty in making an article of merchandise the standard of value. No legislation can prevent it from constantly varying in quantity and value as every product of labor necessarily must. The quantity will be ever changing according as it is produced, imported, exported, or used, thus causing the standard to fluctuate with the ever-changing wants of trade. But the matter is still further aggravated when we take this article of merchandise—an article ever passing from country to country, and whose value is ever changing according to the ratio of supply and demand, and use it as the basis upon which to issue paper money, that shall be redeemable in this same article, of uncertain value, thus quadrupling the fluctuations of the currency.

How much of the present value of gold arises from legislation, making it a legal tender, and how much from its intrinsic worth as a product of labor like copper or iron, it may be difficult to estimate. The principal use of gold being for coinage, and its inferior use for ornament and in the arts, there can be no doubt but that a large part of its present value is derived from laws compelling its receipt at fixed and arbitrary rates. Were all these laws repealed in all the countries where they now exist, gold would, of course, fall to its actual worth as an article of commerce; and its very cheapness might prevent its use by the fashionable world as



an ornament. If we estimate this reduction at seventy-five per cent., and it would probably be more than that, then to this extent is its present exchangeable value as much the creation of law as is that of greenbacks. This increase of value, however, does not change the nature of gold as an article of commerce. It is still subject to the laws of supply and demand.

I think it must be admitted that bank promises to pay in gold never have been and never can be a standard of value that shall be unchangeable, remaining the same in quantity and value at all times. They have changed, and they inevitably must change, both in quantity and value, to an extent largely affecting the price of commodities.

Let us now inquire how the legal tender will bear the test. The amount in circulation will be fixed by law, and kept so fixed by legal provisions easily executed. It may, in this way, be continued for years without change. Such a currency will never be disturbed in the least by an excess of importations, for the legal tender, having no value out of the country, it will never be exported either as currency or merchandise. The importer who takes it in payment for goods must invest it in the purchase of gold, wheat, cotton, or some other production of the country, leaving the currency undisturbed by the operation. Its value can vary from what the law has affixed to it as a legal tender.

It may be urged that the facility for increasing this currency is so great that Congress would continue the issue until too great an inflation of prices resulted. But why should Congress do so? The public certainly do not call for an inflation of prices, but rather for contraction. And this contraction can be made more certainly and regularly by reducing the issue of legal tender notes than by returning to a specie standard and allowing the banks to furnish a paper currency. Governments have in times past issued paper money in excess. They have also reduced the metallic standards by alloys until they have become nearly worthless. The one can be done as easily as the other, and has been done as often. In a country ruled by the people, where the interests of all classes require that prices should be kept steady, and where the men chosen to make the laws have, as a class, a greater interest than any other portion of the community to prevent inflation, there certainly can be no fears from this source worthy of a moment's consideration.

What would be thought of the wisdom of Congress were it to pass a law that no yard sticks should be used but such as were made of gold, or such wooden ones as should be put into use by the banks under the promise to exchange them for gold ones on demand, the banks in the mean time drawing interest on the wooden yard sticks valued as gold. Nor would the wisdom of the measure be enhanced when it appeared that the banks would frequently have to call in a large part of the yard sticks issued by them, because they must sell their golden sticks to pay the deposits of importers, thus deranging the business of the country.

As the circulation of the country now stands, the following plan could be carried into effect by the action of Congress without disturbing the business of the community:

Redeem all legal tender notes bearing interest, and reduce the amount of all others in circulation to four hundred millions.

Limit by act of Congress the circulation to that amount for five years; and authorize the Secretary of the Treasury to keep that amount in circu-

lation by a reissue, or by the purchase and cancellation of United States bonds, paying for them in legal tender notes, whenever the amount in circulation falls below four hundred millions.

If to this amount is added the amount of bills the banks are authorized to issue, we have a possible circulation of seven hundred millions. Under such an arrangement, it is highly probable the bank circulation would soon reach the extent authorized by law, and it would remain steadily at that point, as there would be little inducement to return bank bills, to exchange for legal tenders. Estimating our population at thirty-six millions, the whole circulation of the country, viz.: seven hundred millions, would give an average of \$19½ to each inhabitant. If we compare this with the circulation of France and Great Britain, it will be found to be much less than either, while we certainly require as large a circulation as those countries. Henry E. Carey estimates the circulation of France to be nearly \$30 per head, and of Great Britain and Ireland, \$25.

In discussing the comparative usefulness of bank notes and greenbacks, it should be borne in mind that there is a radical difference between the paper measure of value established by law, by being made a legal tender to pass as currency, and the paper issued by banks and redeemable in the legal measure of value. The former is not, strictly speaking, a credit. The Government establishing it may or may not promise to redeem it in something else. Whether it does or not, its power of payment remains the same; and its power to purchase will depend entirely on the quantity in circulation as currency in the country adopting it, and out of which it will not pass. The certainty that currency of this nature will not pass out of the country establishing it, is an advantage rather than otherwise. It enables the law-making power establishing it to regulate the quantity so as to make the purchasing power always the same.

The issues of banks, on the other hand, passing as currency, are simply credits given to the corporations by holders of the currency; and their value depends upon the ability of the several corporations issuing them to pay the same in the legal measure of value established by law.

We have now three legal measures of value, gold, silver, and legal tender notes, all varying in their exchangeable worth when used in the purchase of merchandise to the extent at this time of thirty per cent. By the operation of the natural laws of trade, all the business of the country is done in the cheapest currency, and the dearer passes from hand to hand, not as currency, but as merchandise. This state of things has lasted so long that the price of labor and of all kinds of property (except so far as it is effected by the unsettled state of legislation on the currency) has become adapted to the cheaper and more plentiful currency. If we return to the use of the dearer by repealing the laws making greenbacks a legal tender, all the property of the country must fall in value to the extent of at least the difference between the respective values of paper and gold. But experience teaches that such a reduction in the value of property is ever accompanied by extensive failures, decrease of importation, a general embarrassment of business, and a stoppage of manufacturing and mining industry, thus largely lessening the revenue, the same cause also greatly reducing the income tax. This state of things is sure to arise, whether the reduction of the currency to a specie basis is made at once or gradually. If it is made gradually, so as to spread the loss on property over



years, embarrassment is experienced during all the time, and no wholesome business can be done until the end is reached. If the reduction is made at once, the crash is greater; but the business of the country sooner resumes a stable condition. Under such a state of things as must exist while returning to low prices, how are our loans to be renewed, or even the expenses of the Government met?

When gold is made the basis of our currency, there is nothing to prevent and everything to induce our powerful foreign rivals to break down our manufacturing and mining industry by flooding our markets with metals, manufactures, railroad stocks, United States bonds, all at the same time, and, with the money thus obtained, drawing suddenly from the banks the gold upon which our paper circulation depends, thus forcing a sudden and unexpected contraction of our bank accommodations, such as we had in 1857; and when the pressure and panic which ever accompany such a state of things, were at their height, quietly investing the funds thus obtained in our productions, stocks, and bonds, at prices much below their intrinsic value, making money by the operation, and crippling our industry at the same time. The profitable operation can be repeated from time to time until our miners and manufacturers are entirely discouraged and broken down. We may rest assured that such an opportunity will not be allowed to pass unimproved by our shrewd, money-loving manufacturing, and commercial rivals.

The annual saving of the country by the adoption of the proposed plan, in place of returning to a specie basis, may be estimated as follows:

The interest on four hundred millions used as currency at six per cent. would be twenty-four millions. The interest on two hundred millions of gold now lying unproductive—then liberated and sent abroad as exports—twelve millions. An additional tax on the banks of three millions, which they could well afford to pay, rather than return to specie payments. The interest on the amount which would be saved by paying that portion of the national debt payable in currency, in currency of the same value as that in which it was borrowed, rather than by paying it in one of largely increased value. This portion of the debt being one thousand seven hundred millions, the saving could not be less than five hundred millions.

This makes an aggregate annual saving of sixty-nine millions, otherwise to be taken out of the pockets of the great mass of the people to go into the pockets of the few owners of accumulated capital held in the shape of notes, bonds, and other interest-bearing securities. Those in the receipt of salaries would not be permanently affected either way; for their salaries would be raised to correspond with the prices ruling under the new order of things, as soon as the policy of our Government became fixed. When this policy was determined, they would be benefited quite as much, and perhaps more than by any other class in the country, as they pay their full share of taxes.

The amount of the currency being now fixed so that the present value shall be continued, we shall pay our national debt in a currency worth twenty per cent. more than that in which the loan was contracted. If we return to specie payments, we further increase the value of the currency in which the debt will be paid thirty per cent., so that we shall actually pay our debt in a currency worth fifty per cent. more than that in which it was borrowed, and to this extent we increase our national debt. And, without

any obligation on the part of the Government, this is done to the extent of that part of our debt payable in currency, viz.: one thousand seven hundred millions. Is this wise? Is it doing justly by our already over-taxed people? And who are to reap the benefit of this enormous addition to our indebtedness? The holders of the bonds at home and abroa.—these are the people who make the public sentiment which calls for a return to specie payments:

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### THE BANK OF ENGLAND.

BY MERCATOR.

(Continued from page 116.)

We have now to resume our narrative of the Bank of England, which had not long commenced its career when it became the object of much distrust and unpopularity, and was obliged to strain every nerve to obtain a reasonable amount of business. At first this establishment lent its money at 6 per cent. which was the highest it could charge: but to augment its customers, in 1695, it proposed to discount certain bills as low as 3 per cent, and to advance money on land, plate, and other securities. It was, however, in 1696 that the Bank had to pass through its first ordeal. This occurred during the re-coinage of the silver currency, when the Government was destitute of money and credit, notwithstanding the succor it had so recently received, and threatened to drag the "Old Lady of Threadneedle Street" into the vortex with it. The tallies at this eventful period, which represented the debts due by the Government to the public, had fallen to a discount of 40 per cent. and the notes of the Bank to 20 per cent., which compelled the latter to issue bills of exchange as a substitute for its notes, bearing interest at 6 per cent; and parties owing money to each other were permitted to transfer their accounts for any sum under five (5) pounds. To meet the difficulties of the crisis Mr. Montague, afterwards the accommodating and intriguing Lord Halifax, invented a form of paper money called Exchequer Bills; and as the Bank had even better credit than the Government, it was instrumental in causing them to float.

But while thus serving the State the Bank did not forget their own interests; but applied for a renewal of the charter which had only been three years in existence. It is said that it is an ill-wind that blows nobody good luck, and the misfortunes of the Government having afforded the Banks an opportunity to render, at a critical juncture, important service, the circumstance was highly advantageous to it. By the 8th & 9th William III, it was empowered to increase its capital stock in the *depreciated notes and tallies*, so that these securities, which had been bought at a very great discount, were suddenly raised considerably above par. These and the Bank Stock, with which they were purchased, ascended to 112 per cent. The proportions in which the the subscriptions were to be made were four-fifths in tallies and one fifth in Bank Notes at their par value. The interest on the tallies to be fixed at 8 per cent. secured by a duty imposed upon salt. The addition to the capital stock upon this occasion was £1,007,171 10s., making the total £2,201,171 10s.

By this act the charter was prolonged until 1710, and several other

valuable privileges were conferred upon the Bank, one of which was, *that no other similar corporation in the nature of a Bank should be established in the Kingdom.* The Bank had now the field to itself, and rode the high horse—but in 1704 it had to meet a formidable rival in a company called the “Mine adventurers of England,” to which the crown, somewhat ungratefully, and, as the event proved indiscreetly granted a charter.

It is sufficient to show the little reliance which, at a demoralized age, is to be placed in exalted names as a security against fraudulent practices, when we find at the head of the petition soliciting a charter for this wild scheme the signatures of the Duke of Leeds, Earl Bolingbroke, Lord Guilford, and Sir Thomas and Sir Henry Mackworth. This chartered swindle, after having been made the instrument of plundering the public by an organized system of fraud, which surpassed even that of the Royal British Bank, exploded, much to the gratification of its rival, the Bank of England. Parliament, upon an investigation of this case passed a resolution in which it was declared that Sir Humphrey Mackworth, the deputy governor, of whom the late John Sadlier appears to have been an humble imitator, was guilty of scandalous frauds and *indirect practices*, in violation of the charter granted to said company, in breach of his trust, and to the manifest wrong and oppression of the proprietors and creditors of the company; and unanimously voted that a bill should be brought in for preventing him and William Shones, the secretary, and Dykes, the treasurer, from leaving the kingdom or abstenating their estates. It might be thought that this break-up of a chartered bank, launched under such distinguished patronage, would have rendered the Government more circumspect in future in connecting itself with similar schemes; but far from this being the case, Lord Oxford, in 1711, when he filled the office of Prime Minister, was one of the chief promoters of that scheme which has descended to posterity at the South Sea Bubble. The Bank now having a clear stage, and being no longer obliged to contend with rival establishments, took advantage of the monopoly it possessed. The directors feeling that it was their interest to maintain a good understanding with the parties who managed affairs at Whitehall, always evinced a desire to make things pleasant to the latter upon condition that they themselves should not suffer by affording the accommodation required. We find them, in pursuance of this plan, undertaking to circulate Exchequer Bills for the Government to the extent of 1,500,000 at  $4\frac{1}{2}$  per cent. interest; but taking care at the same time to stipulate *that they should remain a corporation until the amount was redeemed.*

In 1708, we observe them still keeping their eyes steadily fixed upon their own interest, and by the following clause introduced into the 7th Anne, Cap. 7, Sec. 61, securing to themselves the *sole privilege* of banking: “During the continuation of the corporation of the Governor and Company of the Bank of England, it shall not be lawful for any body, politic or corporate whatsoever, created or to be created, (other than the said Governor and Company of the Bank of England) or for any parties whatsoever, united or to be united, *in covenants or partnerships, exceeding the number of six persons*, in that part of Great Britain called England, to borrow, owe, or take up any sums of money on their bills, notes payable on demand, *or at any less time than six months from the borrowing thereof.*” This clause laid the foundation of that monopoly which has since, with

little relaxation, been preserved, and which has proved so baneful to a commercial country. We shall, as we proceed further, find another generation of Bank of England directors excusing themselves for their inability to accommodate the commercial classes, in consequence of their want of capital, having lent all their available funds to the Government. We look back with astonishment at a few persons associated together to carry on the business of bankers, under the authority of a charter granted for a limited period, claiming such a monopoly, and feel contempt for the legislation which could concede a privilege so unjust and unsound. The Parliament, however, which passed this law, it should be remembered, was abominably corrupt. Its members were openly bribed by the Minister of the day, and ready to perform any filthy work required of them to earn the wages of sin.

In this year, the advantages obtained by the Bank were more than neutralized by its reverses. There was a threatened invasion of Scotland by the French, in support of the Pretender; and a run directly on the Bank—ever the victim of evil rumors and panics—was the result. We do not believe that the Scottish National Bank, which Wm. Patterson started, was affected in a similar measure, or that the threat of invasion damaged its credit and placed its safety in jeopardy. The Bank of England, more frightened than injured upon this occasion by the alarm of the English people,—which must strike foreigners as a strange and ludicrous spectacle—weathered the storm by the Government allowing interest at the rate of 6 per cent. instead of 3 upon sealed bills, and by a rate of 20 per cent upon the proprietary. Several wealthy Peers, among others the Duke of Marlborough, who owed all he possessed to the exiled Stuarts, came forward at this crisis and offered large sums of money to sustain the Bank, which would argue that the institution enjoyed the good-will of patricians, though it had not enjoyed the confidence of the people.

(To be continued.)

### MINERAL PRODUCTIONS OF THE UNITED KINGDOM.

The Mineral Statistics of the United Kingdom for 1865 have been completed by Mr. Robert Hunt, of the Museum of Practical Geology. Sir Roderick Murchison, as director-general of this establishment and the Geological Survey, in his introductory notice, draws attention to the remarkable increase in the production of coal during the past year, and to some tables which, he states, "give a more correct view of the progress of our coal and iron industries than any statement which has hitherto been published." The importance which attaches to everything connected with coal at the present time induces us to commence our notice with it, although the coal returns form Part 2 of the "Mineral Statistics":—

Tons produced.		Tons produced.	
Durham and Northumberland.....	25,32,694	Shropshire.....	1,135,000
Cumberland.....	1,341,047	Gloucestershire and Somersetshire..	1,875,000
Yorkshire.....	9,35,100	Monmouthshire..	4,125,000
Derbyshire.....	4,595,750	South Wales.....	7,911,407
Nottinghamshire.....	1,095,500	North Wales.....	1,983,000
Leicestershire.....	965,500	Scotland.....	12,60,000
Warwickshire.....	859,000	Ireland.....	123,000
Staffordshire and Worcestershire...	12,200,989		
Lancashire.....	11,964,000	Total produce of the U Kingdom..	98,150,517
Cheshire.....	850,000		



This gives an increase of 5,362,709 tons of coal in 1865 over the production in the previous year. We find from the tables alluded to that in the last five years the quantities exported and retained for consumption have been as follows :

	Exported. Tons.	Retained. Tons.	Used for each head of the population. Tons. Cwts. qrs. lbs.			
1861.....	7,855,115	77,657,029	3	7	2	6
1862.....	8,301,852	75,202,986	3	4	1	2
1863.....	8,275,212	79,890,253	3	8	1	20
1864.....	8,809,908	83,852,265	3	1	0	21
1865.....	9,170,477	88,980,110	3	13	2	24

It is therefore evident that the largely increased quantity of coal produced is consumed in their own manufactures, in commerce, or for domestic fires. Mr. Robert Hunt shows, by another tabular statement, that for the same five years there have been used for every branch of iron manufacture the following quantities :—

	Coal consumed in making iron. Tons.	Leaving for all other purposes. Tons.	Or for each head of the population. Tons. Cwt. qrs. lbs.			
1861.....	22,273,762	55,383,267	2	7	3	3
1862.....	23,552,107	51,650,879	2	3	0	13
1863.....	27,013,082	52,877,171	2	5	2	23
1864.....	28,715,439	55,187,526	2	6	0	3
1865.....	28,788,052	59,197,058	2	9	0	8

For the purpose of rendering this history of the coal trade as complete as possible within the limits to which at present the enquiry could be extended, returns of all the coals brought into London since 1834 are given, a detailed statement of all the collieries sending coal in the metropolitan district since 1854, and the prices of Newcastle and Sunderland coal in the London market during each month since the year 1832. From that in 1834 by sea and canal London received 2,080,547 tons, and in 1844, 2,563,166 tons. In 1845 the railways began to bring coal to London, the quantity in that year being 3,461,199 tons. In 1854 there was an advance to 4,378,732 tons, and in 1864 to 5,476,426. The quantity brought within the metropolitan district last year being 4,900,940 tons.

Iron.—Of iron ore it appears that there was raised from iron mines and collieries 9,910,045 tons, which is valued at the place of production at £3,324,084 13s 2d. This was used to feed 656 blast furnaces, from which flowed forth 4,819,254 tons of pig iron. Of this, 543,018 tons were exported and upon the remainder 6,407 puddling furnaces, and 730 rolling-mills were employed in converting it into finished iron.

Tin.—The quantity of tin produced in 1865 was larger than that obtained from the tin mines in Cornwall and Devonshire in any previous year, amounting to 16,686 tons of tin ore, of the value of £866,435, from which 10,039 tons of metallic tin was obtained. The quantities of tin ore produced during the previous five years have been as follows :—

	Ore raised. Tons.	Price of Ore. per Ton.		Ore raised. Tons.	Price of Ore. per Ton.
1860.....	10,462	£71 11	1863.....	15,157	£63 12
1861.....	11,640	62 7	1864.....	15,211	60 17
1862.....	14,127	59 14			

This increase of production has strangely kept pace with a steady decline in price, until in 1865 the mean average price was £55 6s. The

system under which tin mines have long been worked renders it necessary to meet the exigencies of the share-market, that at any cost calls should be avoided and dividends declared. Hence, as the price has fallen each mine has poured more tin into the market to put off for a short season the evil day which must soon arrive. Seeing that very large quantities of tin are steadily arriving in England from Banca and Billiton, and that the Dutch merchants hold 7,690 tons of tin, available for the coming twelve months, there is no hope of any increase of price, until necessity, by closing many of the productive tin-mines, reduces the supply.

**COPPER.**—The copper mines of Great Britain and Ireland produced last year 198,298 tons of copper ore of the value of £927,938. From this 11,888 tons of copper were smelted, which had a value of £1,134,664. The production of British copper ores has been for some time steadily declining—the ores, as shown, by a table given, are becoming poorer, and the price which was for Cornish copper ores in 1856 £6 2s. 6d. has fallen to £4 15s. in 1865. The imports of foreign and colonial copper have been very large, that of copper ore amounting to 82,562 tons, and of regulus to 39,686 tons, while cake and manufactured copper have also been largely imported.

**LEAD.**—The total quantity of lead ore raised in the United Kingdom in 1865 was 90,452 tons, from which we obtained 67,181 tons of metallic lead, and 724,856 ounces of silver.

**ZINC.**—The ores of this metal—blende and calamine—have raised more freely, owing to a slight advance in the price of the ore, than it has been for some years past. Our mines produced last year 17,842 tons of zinc ores, against 15,047 tons obtained in 1864.

**GOLD.**—From the gold quartz which is mined from the Welsh hills in the neighborhood of Dolgelly we have the following returns:—

	Ounces of Gold.		Ounces of Gold.
Vigra and Clogau.....	582	Gwynfynydd.....	8
Welsh Gold Mine.....	277	Cwmheisan.....	8
Castell Carn Dochan.....	827		
Castell Carn Dochan.....	8		1,663

In 1864 2,336 ounces of gold were obtained, and in 1862 5,299 ounces.

**SULPHUR ORES.**—Iron pyrites have been raised during the year to the extent of 114,195 tons, the value of which is estimated at £71,174. Of this quantity 81,990 tons have been raised in county Wicklow, Ireland.

**BARYTES.**—A mineral which is largely used to mix with white lead; there are returns given of 6,768 tons.

**ARSENIC.**—Of the white oxide of arsenic a return has been made to the Stannary Court of 826 tons, separated from other ores, and sold in Cornwall.

The following table gives a concise view of the importance of the mineral industries of the United Kingdom:—

*General Summary of the Minerals Raised and Metals Produced in the United Kingdom in 1865.*

	Minerals Raised		Metals Produced	
	Quantity.	Value.	Quantity.	Value.
Tin, tons.....	16,686	£867,437	10,939	971,273
Copper, tons.....	198,298	927,938	11,888	1,134,664
Lead, tons.....	90,451	1,153,134	67,181	1,483,161
Silver, oz.....	.....	.....	724,856	199,335

Zinc, tons .....	17,842	52,478	4,460	104,810
Pyrites, tons .....	114,195	71,174	.....	.....
Gold (quartz) .....	4,280	.....	oz 1,164	5,824
Iron, tons .....	9,910,045	3,324,804	4,819,254	11,774,220
Coal, tons .....	98,150,587	24,537,621	.....	.....
Earthy minerals and others, returned .....	.....	774,466	.....	.....
Earthy minerals and returned, estimated .....	.....	650,000	.....	.....
Metalliferous ores and metals, other than above estimated.	.....	.....	.....	.....
<b>Total value .....</b>	<b>.....</b>	<b>32,359,080</b>	<b>.....</b>	<b>15,773,287</b>

The following, therefore, represents the total value of the productions of our mines and collieries in 1865 :—

Metals obtained .....	£15,773,287
Coal .....	24 537,621
Earthy minerals (not including ordinary clays and building stones) .....	1,484,496
<b>Total .....</b>	<b>£11,745,404</b>

### THE COPPER MINES OF CANADA.

The Bruce Mines, Lake Huron, owned by the Montreal Mining Company, are a group of lodes traversing the location in a northward direction, intersecting a thick mass of interstratified greenstone trap. The strata here present an anticlinal form, the lodes running down the crown of it. All of the lodes contain more or less copper ore, which is disseminated in a gangue of quartz. The main lode which is worked with another of about the same thickness, is, on an average, from two to four feet wide. In a careful examination made in 1848, about 3,000 square fathoms of these lodes were computed to contain about  $6\frac{1}{2}$  per cent. of copper. The quantity of ore obtained from the mine since its opening in 1847 is stated to be about 9,000 tons of 18 per cent. The quantity obtained in 1861 was 472 tons of 17 per cent. The deepest working is 50 fathoms from the surface. The number of men employed is 34. Smelting furnaces, on the reverberatory principle, were erected at the mine in 1853; the fuel used in these was bituminous coal imported from Cleveland, but after a trial of three years the company themselves ceased smelting and subsequently leased their smelting works to Mr. H. R. Fletcher. At present the ores are in part sent to the Baltimore market, and in part to the United Kingdom.

**ACTON MINE, ACTON, LOT 32, RANGE 3.**—The ore of the Acton Mine occurs in masses subordinate to the stratification at the summit of a band of greyish white and reddish-grey compact sub-crystalline dolomite, from 200 to 300 feet thick, belonging to the base of the Quebec group. The dolomite is divided into massive beds; it is associated with a good deal of chert, and encloses mammillated fibrous concretionary forms resembling those of travertine. At the summit the dolomite often terminates in a breccia or conglomerate, with angular and rounded masses of limestone, intermingled with ragged, irregular, masses of chert. In many places the dolomite is marked by the occurrence of the yellow, variegated, and vitreous sulphurets of copper, which are in patches, running with the

stratification. In the neighborhood of these, many veins and strings of quartz intersect the rock in various directions, and hold portions of the sulphurets of copper. The copper ores, which often contain native silver, appear to be more abundant in the upper part of the rock. At Acton, the conglomerate is separated from the main body of the dolomite by between eighty and ninety feet of dark grey or black slates intermixed with diorite; in these the conglomerate lies in large isolated masses running parallel with the summit of the main body of the dolomite. On the opening of the mine the sulphurets, where most abundant, appeared to occupy a position immediately near some isolated masses of conglomerate and partially to surround them, in some parts constituting the paste of the conglomerate. As the work proceeded, many slips and dislocations, of no great magnitude, were found to cut the strata. Some of them appear to run with the strike, and others in two of parallel series, oblique to one another. These disturb the regular continuity of the copper bearing bed, producing apparent undulations in the dip, and causing the diorite and the limestone to protude into the copper or unexpectedly to interrupt one another. The ores were found to be concentrated in three large masses, occurring in a length of about 120 fathoms. Proceeding south-westwardly, the space occupied by the most northern mass, from a breadth of a few inches gradually widened out to about ten fathoms in a length of about forty fathoms; beyond which it appeared to be thrown out fourteen fathoms obliquely to the westward. The general bearing of the succeeding two masses was still to be the southwest. They were about fifteen fathoms apart, and larger or more southward, one swelled to a breadth of fifteen fathoms. The depth to which the ground has been worked on the general slope of the bed is about ten fathoms; the cupriferous rock at this depth has a breadth of about twelve feet in a shaft on the northern mass, and shows rich ore in the floor and the parts adjacent; but with the exception of what is called Pike's pit, in the most southern part, the floors of the other masses do not at present exhibit that same abundance of ore which characterized the upper part. The working of the mine, however, up to the present time, has been confined to the extraction of the rich ore which was in sight. Little or nothing has been done for discovery, and it cannot be said how near to the present floor of the mine may be found other masses, similar to those which have been excavated. Beyond these masses, in opposite directions to the surface, the ore becomes more scattered in the strata; but there is evidence of its continuance for several hundred feet, in spots and patches, occasionally aggregated into masses of much less importance than the three principal ones. In the first few weeks' work in 1859 about 300 tons of ore, containing nearly thirty per cent. of copper, were quarried, in open cuttings, from two of the masses, without making much apparent impression on the quantity in sight. The total quantity said to be sent from the mine to 1861 is about 6,000 tons, holding an average of about 17 per cent. of copper.

UPTON MINE, UPTON, LOT 51, RANGE 20—The band of dolomite, which sinks with a northwestward dip at Acton, rises again at Upton, on the opposite side of a synclinal form, at a distance of about six miles. Here about twenty feet in the upper portion of the band are marked by the yellow sulphuret of copper, which is disseminated in the rock as if in a bed, the ore being most abundant in the lower part. The rock is at



the same time cut by many reticulating strings and veins of calcespar, which hold ore. An open cutting has been made on the outcrop of the bed; the quantity of ore obtained is stated by the proprietors to be forty tons, and a sample, represented by them to be an average one, yielded to the analysis of Mr. C. Robb, 14 per cent. of copper. The quantity of rock which has been excavated is uncertain.

**BISSONNETTE'S MINE, UPTON, LOT 49, RANGE 20.**—From the position where the rock has been wrought in the previous mine, the band of dolomite runs southwestward for nearly a mile, and then appears to be thrown upwards of half a mile to the south-westward by a dislocation. Bissonnette's mine is on the southwest side of the dislocation, and apparently in the same stratigraphical place in the band as the Upton mine. The bed is about three and a-half feet thick, and the ore lies in disseminated masses of various sizes up to twenty inches long by six to nine inches thick. The bed might probably yield from a half to three-fourths of a ton of ten per cent. ore to a fathom.

**WICKHAM MINE, WICKHAM, LOT 15, RANGE 10.**—The ore occurs in masses, disseminated in what appears to be a bed, of uncertain thickness, in the same band of dolomite as that of the Acton mine. An experimental shaft has recently been sunk on it to a depth of about five fathoms, in which good bunches of ore have been met with. About four tons of 30 per cent. ore have been obtained from the excavation.

**YALES MINE, DURHAM, LOT 21, RANGE 7.**—At this mine several veins, carrying more or less copper, intersect a mass of magnesian limestone, which is supposed to belong to the same band as that of the Acton mine. The veins have a general bearing northeastward, and trial shafts have been sunk on three of them, the thicknesses of which vary from 6 to 30 inches. The vein-stone is calcespar, with a little quartz, occasionally mixed with portions of the wall rock. On the most northwestern vein the excavation is two fathoms deep, and reaches black shale beneath the limestone. On the middle one, which is 18 feet to the southwest, the excavation is six fathoms deep, again reaching black shale; and on the third, 24 feet farther to the southeastward, a shaft sunk about four fathoms is still in magnesian limestone. In this shaft the vein has an underlie to the southeastward of about a foot in a fathom, and in a breadth from 6 to 12 inches shows good lumps of ore, mixed with calcespar and wall rock.

**BLACK RIVER MINE, ST. FLAVIEN.**—At St. Flavien, about five leagues above the Chaudiere and two leagues from the St. Lawrence, red shales occur, underlaid by a band of amygdaloidal diorite; this appears to occupy the place of the magnesian limestone to which the band at Acton belongs. It is between a quarter and half a mile wide, and limestone occurs both at the summit and at the base of the band, which in those parts appear to be of a concretionary or conglomerate and brecciated character being composed, particularly at the base, of rounded and angular masses of amygdaloidal diorite, varying in diameter from two inches to two feet. Many of these are calcareous, and much of the rock is red. The interstices among the masses are filled with calcespar, which is transversely fibrous towards the walls, and encloses crystallized quartz in the centre. This band is highly cupriferous, and ores of copper occur both in the beds and in the veins or lodes which cut them—the bearing of the veins, however, being with the strike. The ore in the beds is copper pyrites, large masses

of which, similar to the one exhibited, are associated with the limestones at the top. The veins, in addition to copper pyrites, hold the variegated and vitreous sulphurets. In one spot, native copper occurs in small masses in the conglomerate at the base of the diorite. The whole band has a striking resemblance to some of the rocks of the upper copper-bearing series of Lake Superior.

N. B.—A band of diorite very similar to the one above mentioned, and perhaps a continuance of it, occurs at Drummondville, on the St. Francis, where the bank is half a mile wide. On lot 1, range 1, of Wedyver, it holds yellow, variegated, and vitreous sulphurets of copper, which run in six or seven thin veins or courses, formed by breaks and slips in the diorite within a breadth of 350 yards.

The rocks of the Quebec group, which are almost wholly on the South side of the St. Lawrence, are distributed in long, narrow parallel synclinal description, these have been divided into—1st. The Lauzon and Farnham synclinal, which is one of the most to the N. W.: 2d. The Shipton and St. Armand synclinal, continued to the N.E. in the Shipton and Leeds synclinal. Between these two synclinals runs the Bayer and Stanbridge anticlinals, and beyond them to the S.E. is the Danville and Sutton anticlinal. From this there branch, in the neighborhood of the St. Francis, the Sutton Mountain anticlinal and the Melbourne and Potton anticlinal. The six copper-bearing beds and veins that have been mentioned, 4 9, are all included in the Lauzon and Farnham synclinal.

HARVEY'S HILL MINE, LEEDS, LOT 18, RANGE 15.—At Harvey's Hill mine there occur, in a breadth of about 1,000 feet, eight courses, with a north-eastward bearing, composed chiefly of quartz with various proportions of bitter spar, chlorite, and calcspar. They all cut the strata, with an underlie at high angles, to the north-westward, and hold in greater or less quantities the yellow, variegated, and vitreous sulphurets of copper. These quartz-courses, which appear to have lenticular forms, occasionally extend upwards of 100 fathoms horizontally. Some of them have shown a width of as much as seven feet in the thickest part, occasionally for carrying short distances as much as two tons of twenty per cent ore to a fathom. The rock of the country is a talcoid, mica slate, which forms its lustre, is called a nacreous slate. To prove the quartz courses in a downward direction, an adit level is being driven through these slates, from the north side of the hill, at a level of thirty-seven fathoms below its summit. The length of this adit when complete will be 220 fathoms. The same sulphurets of copper which characterise the quartz courses occur also in beds conformable with the stratification. Of these there are three at Harvey's Hill. The lowest one resting on a six feet bed of soapstone, is six inches thick; fifteen feet above this there is another three inches thick; and twenty fathoms still higher, one varying in thickness from twenty to thirty inches. In these beds the ore is distributed through the nacreous slate in patches, generally of a lenticular form; they are usually thin, but sometimes attain one-half to three-fourths of an inch in the thickest part, and occasionally present in section lines of six inches or even twelve inches in length. The patches interlock, one overlapping another, with variable distances between; while many single crystals and grains of ore are disseminated through the whole thickness of the beds. The quantity of ore obtained from the mine is uncertain; the number of men employed is about fifty.

ST. FRANCIS MINE, CLEVELAND, LOT 25, RANGE 12.—The ore is disseminated in a vein slightly oblique to the stratification of a quartzo-chloritic rock, frequently studded with nodules of orthoclase feldspar, often surrounding small centres of quartz; the nodules give to the rock the aspect of an amygdaloid trap. The bed has an average thickness of three feet, and the rock is supposed to occupy a higher stratigraphical place than the Acton dolomite. The vein is traced running N.E. for 90 fathoms. Five or six small excavations, each one of a few fathoms in length, have been made in the outcrop to the depth of two feet, and in these the variegated and vitreous ores are mixed with the yellow sulphuret.

#### FALLACIES ABOUT SPECIE PAYMENTS.

It is the fashion just now to talk of an early return to specie payments. And the desire which all good citizens have to get back to a sound stable currency, leads not a few of us to welcome every downward movement in the price of gold, as if it indicated that we were approaching the desired goal of resumption. If the only force which is at this moment acting on gold to depress or raise the premium in the market, were an appreciation of greenbacks, and took its origin in a reform of our paper money, these sanguine expectations would not be devoid of foundation. But it is notorious that gold is exposed in its daily fluctuations in the market to a host of other influences which have no connection whatever with our greenback currency. Hence, the perturbations in the value of gold, so far as they are due to such causes, offer no indication whatever of responsive movements in the value of our paper money. The thermometer ceases to be a register of the heat of your room whenever the rise or fall of the mercury is tampered with, or is governed by other causes than the heat of the atmosphere. So with gold. It is no accurate gauge of the depreciation of the currency, except its daily price can be freed from perturbation by the foreign exchanges, by the import and export movement of specie, by the supply of floating gold on the market, by the prospect of peace or war in Europe, by the movements of our national Treasury, and by a thousand other occult circumstances, which Wall Street seizes upon and makes the basis of calculation, measurement, and speculation. Let us not be misunderstood. We do not say that the price of gold is never, or in no degree regulated by the depreciation of our paper money. What we say is, that this depreciation, this loss of purchasing power, is one force among a multitude of conflicting forces, all of which modify and regulate the market price of gold. The real price of gold, if we could get at it, might measure the depreciation, and would indicate the purchasing power of our paper money as a thermometer measures degrees of heat or cold; but the *real* price of gold is not the *market* price.

The latter is in very great emergencies, very far removed from the former. Thus, in July, 1864, the market price of gold rose to 285, but the real price was much below that figure, as is proved by the fact that the purchasing-power of the greenback-dollar in the hands of the workman who wished to buy with it food or other necessities was as great when gold was at 285 as some weeks earlier when gold stood at 168, or, as it was last April, when the rate was 125. We might, indeed, with

as much justice, argue that the great law of gravitation is suspended because the sea pours its waters up the Hudson twice a day as to deny the great law that currency redundancy produces currency depreciation because of certain tidal perturbances in market-value which prevent the rate of gold from corresponding exactly with the rate of depreciation. Without arguing the question more at length, then, enough has been said to show the fallacy of the prevalent opinion that whenever, from any causes whatever, gold is going down in price, we are of necessity improving our depreciated deranged currency or drawing a step nearer to resumption of specie payments.

Another view which is abroad in reference to this subject is that, by hoarding up gold in the Treasury, we shall facilitate an early resumption. We have at present more than seventy millions of Government gold in the Treasury vaults. When we have one hundred and fifty or two hundred millions hoarded up there (if, contrary to belief, there is enough gold in the country to permit us to amass so much without inflicting great mischiefs on commerce), what good will this prodigious store of coin do to us? Suppose, with this one hundred and fifty or two hundred millions, we offer to redeem our legal tenders at par, what would be the natural result? Of these legal tenders we have outstanding no less than five hundred and fifty-five millions. And how long would our two hundred millions remain in the Treasury? It is easy to see that every holder of greenbacks would hasten to get coin for them. The greenbacks would pour into the Treasury and the gold would flow out in a resistless stream until, at the end, there would remain more than three hundred and fifty millions of greenbacks outstanding, for which no gold could be got at the Treasury. Now, every man of business must see at once that the spasms produced by such a violent perturbation of the circulating medium would fill the whole country with panic. Bankruptcy and universal stagnation would succeed; and it would be well if, in the general ruin of our commercial and financial interests, the national debt was not at one stroke swept away. Happily, no such mischievous and suicidal scheme as this was ever adopted by any nation as a remedy for the evils of irredeemable paper money. Certainly, there is in our people too much good sense and general knowledge of history and finance to render it in the least degree likely that in Congress or among our citizens generally this view will ever stand a chance of getting itself into favor, or of exerting an influence in shaping the financial policy of the future.

But, to understand the true remedy and the mode of applying it, we should ask ourselves what is the impediment to our resumption of specie payments? To this question, the reply is that the redundancy of the currency is the chief impediment. Take this stupendous obstacle away and all others will be of small moment. Contract the volume of the currency to its normal limits, and whatever else is needful will be done with comparative ease. The greatest, the most necessary, and the first step toward specie payments, is contraction of the currency. Although there is no proposition in financial science which is better established than this, all kinds of visionary projects for restoring the currency are found in the public press. One of the chief causes of this is the mischief induced by contraction when it is done unskillfully, or at the wrong time. The



first occasion on which this mischief was very prominently brought into view in our recent financial history was in the summer of 1863, when Mr. Chase, persuaded by persons who urged him to give a check to speculation, suddenly locked up in the Treasury a large amount of greenbacks, hastily gathered, by various expedients, in the City of New York. Had the absorbing of this money been slow, or had an adequate previous notice been given, the equilibrium would have been less violently disturbed. As, however, this previous notice would have defeated the object in view, the movement was made suddenly, and fell like a thunderbolt from a clear sky. A panic was produced which will be long and sadly remembered in financial circles. A few speculators were made rich by it, but thousands were impoverished, and it was estimated at the time that the loss by depreciation of property was 106 millions of dollars. Ever since this period, we have had in the popular mind such a dread of contraction of the circulation, that there has been a readiness to listen to any proposals for returning to specie payments without this indispensable condition. All these schemes, however, as we have said, are absurd, and attempt an impossibility. Never in the history of nations has any depreciated currency been restored to par except by contracting its volume. As well might a boat attempt to go from Lake Erie to the sea without descending the whole depth of the Falls of Niagara.

This, then, is the difficulty. Contraction of the currency is necessary. But to contract violently is impossible. To make the leap at once would engulf the whole country in bankruptcy. We must, therefore, take the next best means. As we cannot descend to the level we want at one plunge, we must be content to do it by gradual degrees. As a vessel may safely go down by a series of locks to any required depth, in its transit from the lakes to the sea, so may our financial barque, if well piloted through the successive slow movements which are needful, gradually reach the desired haven of resumption. There is then a right way and a wrong way to contract the currency. The wrong way is to make the plunge suddenly, and its end is inevitable failure. The right way is to diminish the volume of our circulating money by slow degrees. This is the way decided on by Congress, in prohibiting a greater reduction than four millions a month. And, if preserved in, this safe course will bring us to specie payments in less time, and with less danger of revulsion and panic, than any other.

If the testimony of history were not so full and complete that necessity of contraction is necessary to resumption, we might infer it from the fact that depreciation is produced by redundancy. Neither French Assignats, the Continental currency, nor our own greenbacks, depreciated noticeably in value till they were issued in excess. Now, depreciation being caused by redundancy, a recovery from the morbid state is to be realized only by removing the cause—that is, by correcting the redundancy. Of our paper money, a sufficient amount must be withdrawn to make the aggregate what it would be on a coin basis. This normal amount is not fixed and rigidly stationary. Like the current of the Mississippi, it varies responsively to various causes at different parts of the year. But it varies within bounds which are ascertainable and self-regulating. How much currency we should want were the paper dollar equal to ten dimes in coin, cannot be discovered by referring to the period be-

fore the war and the suspension of specie payments. At that period two hundred millions were enough. During the last five years we have vastly expended our financial operations, our mercantile enterprises, and our productive industry. There is more need therefore, and more use for the circulating medium. The amount which is now required has been estimated at three hundred millions, and it probably could not safely exceed four hundred millions without being reduced in purchasing power below the level in coin.

In England the average amount of current money is under 250 millions of dollars; in France under 300 millions. But the habits of various countries differ so widely as to the methods of doing business and of economising currency, that no certain conclusion can be reached, save by experience. From what has been said, however, three or four conclusions are sufficiently clear. First, a large amount of our 800 millions of active paper money must be withdrawn before we can get down to the level of specie payments. Secondly, if high prices necessitate the use of a large volume of currency, and redundant currency therefore puts prices up, the converse is true, and a permanently contracted currency will produce permanently lower prices for real estate, merchandise, and all other commodities. Thirdly, the contraction being gradual, and extending itself over a series of years, the shrinkage in prices will be almost insensible, or may, at any rate, be adjusted with such quietude as to do but little harm. Fourthly, the debtor classes of our population, who will suffer by contraction, are those which are mostly sensitively exposed to pecuniary injury, and which suffer most severely under it. Hence the necessity for caution as to every successive step we advance in the path of contraction.

In view of these facts there is the most anxious watchfulness over any of Mr. McCulloch's movements which seem to look towards interference with the currency. His power to call in greenbacks is limited by Congress to 48 millions a year. He may withdraw less than this sum, but he is not permitted to withdraw more. But there are other parts of the currency over which Congress has left him unlimited power. The compound interest legal tenders he can withdraw as fast as he can buy them at par, first cost. If the price were not two per cent above par he would have the ability to act on the currency by bringing these notes, which are largely held by the banks as reserve instead of other legal tenders. Being so held as reserve they perform one of the functions of currency, and thus do the duty of a certain amount of greenbacks, which are released for active use in the current of circulating money. We doubt the policy of paying off the Clearing-House certificates, which have been held by the banks at four per cent. interest. Forty five millions of currency are thus being thrown into the banks, and they will be tempted to lower their reserve, and either to lend their surplus funds in discounting rashly, or to invest for speculative purposes. This lowering of the reserve is obviously a weakening of the position of the banks. At present they hold considerably more of legal tenders than the twenty-five per cent. reserve required by law. Some of the reasons why we have had so swift a recuperative movement after the monetary spasms which have visited us, is to be found in this extraordinary strength in the reserve funds which constitute the buttresses and bulwarks of our financial edifice. Two of the most powerful inducements which have led and enabled the banks to strengthen

themselves with so ample a reserve, are found in the compound interest notes and the Clearing-House certificates. We have, consequently, grave doubts whether it is safe and wise at the present moment for the Secretary of the Treasury thus to disturb the currency. Contraction is a good policy, a necessary policy, but it must be timely, not at the active period of the year, and it should be slow. At the same time every inducement should be held out to our banks to increase this reserve.

### TRADE OF GREAT BRITAIN AND THE UNITED STATES.

#### COTTON, BREADSTUFFS, PROVISIONS, ETC.

Notwithstanding the Bank rate of discount was at 10 per cent. during the month of July, the English Board of Trade returns for that month, which we have just received, present many favorable features. As regards that country, the results show most conclusively the importance of the trade between us and Great Britain, although it must be borne in mind that transactions would not have been on the extensive scale reported had no fears been entertained in England that higher rates of import duty might be imposed in this country. Future business has, therefore, been anticipated, and for that reason, in part, is so extensive a trade exhibited during the months of May, June and July.

The declared value of the imports of British and Irish produce and manufactures during the seven months ending July 31 was £107,815,664, against £88,242,048 last year, and £92,441,950 in 1864. There is, therefore, an increase during the present year, as compared with 1865, of £19,600,000, and of £15,400,000 as compared with the corresponding period in 1864. For each of the seven months in each of the last three years the figures stand thus :

	1864.	1865.	1866.
January.....	£10,413,596	£10,489,339	£14,354,748
February.....	12,698,121	11,376,214	15,116,063
March.....	13,555,674	13,770,154	17,520,354
April.....	13,225,039	12,071,111	15,366,414
May.....	14,176,640	13,194,758	15,870,131
June.....	13,978,526	13,227,062	14,630,120
July.....	14,394,364	14,113,410	14,957,834
Total.....	£92,441,950	£88,242,048	£107,815,664

The computed real value of the principal articles imported into the United Kingdom, during the six months ending June 30, was rather more than £30,000,000 sterling greater than in the corresponding period in 1865, and £16,600,000 in excess of 1864. This great increase is chiefly to be accounted for by the augmented importation of cotton from this country. The figures for each month are subjoined :

	1864.	1865.	1866.
In January.....	£7,530,356	£6,398,922	£9,847,564
February.....	13,214,541	12,891,252	16,610,159
March.....	16,396,928	13,005,394	19,891,204
April.....	17,587,565	13,078,755	22,455,068
May.....	22,302,691	14,595,334	23,234,702
June.....	21,498,183	15,407,688	23,243,701
Total.....	£98,610,176	£75,340,272	£115,273,358

As regards the United States, the value of the outward trade in British and Irish produce and manufactures from Great Britain, for the month of June and for the six months ending June 30, was as under :

For June.	1864.	1865.	1866.
To Atlantic ports, Northern.....	£1,503,023	£1,189,363	£1,822,901
Southern.....	10,488	614	57,069
Pacific ports .....	195,435	69,527	98,403
Total.....	£1,708,946	£1,259,504	£1,978,363
For the six months.	1864.	1865.	1866.
To Atlantic ports, Northern.....	£11,435,269	£5,965,101	£14,279,198
Southern.....	65,951	22,562	559,274
Pacific ports .....	526,263	227,274	289,148
Total .....	£12,027,483	£6,214,937	£15,228,220

## COTTON.

The imports of cotton into the United Kingdom in July were 600,000 cwts. less than in the previous month. There was a diminution of 354,000 cwts. in the receipts from this country; and of nearly 220,000 cwts. in the importation from the East Indies. The aggregate supply received was 1,075,244 cwts., of which 404,113 cwts. were from this country, and 509,942 cwts. from the East Indies. In the corresponding month last year the receipts from the United States, including the supplies received from the Bahamas, Bermudas, and Mexico, which were mostly United States cotton, were only 45,000 cwts., and in 1864, only 54,400 bales. Annexed are the figures for the seven months:

## IMPORTS OF COTTON INTO GREAT BRITAIN IN SEVEN MONTHS ENDING JULY 31.

	1864.	1865.	1866.
From United States.....cwts.	£98,824	£82,963	£3,635,202
Bahamas and Bermudas.....	186,858	155,833	5,931
Mexico .....	157,086	249,509	3,145
Brazil.....	218,070	268,767	450,166
Turkey.....	138,558	155,826	82,504
Egypt.....	796,853	904,319	690,267
British India.....	1,889,997	1,411,296	2,888,141
China.....	483,328	256,923	13,469
Other countries.....	155,050	208,621	164,134
Total.....	£4,124,624	£3,694,062	£7,932,936

The subjoined statement shows the computed real value of the imports of cotton into the United Kingdom during the six months ending June 30:

	1864.	1865.	1866.
From United States .....	£1,245,954	£334,213	£25,269,971
Bahamas and Bermudas.....	2,033,809	1,320,109	43,486
Mexico.....	1,826,733	1,816,060	28,591
Brazil.....	2,362,974	1,750,714	3,299,310
Turkey.....	1,296,529	747,676	490,221
Egypt.....	8,952,379	6,193,841	5,466,635
British India.....	15,023,536	5,880,043	11,737,547
China.....	3,570,152	957,866	.....
Other countries.....	1,531,226	1,277,450	1,013,000
Total.....	37,858,292	20,478,572	47,948,759

The exports of cotton from the United Kingdom are on a comparatively small scale, considering the greater abundance of supplies in the Liverpool market, and the more favorable terms on which exporters could be supplied. The unsettled state of Germany during the past six months of the year has been a serious drawback to this as well as to other branches of trade. In July the export was confined to 333,440 cwts., against 218,105 cwts. in July last year. Our latest advices from Liverpool, however, report an increasing demand, and future returns will probably show more satisfactory results. In the seven months ending July 31, the exports of cotton from Great Britain were as under:

	1864.	1865.	1866.
To Russia.....cwts	171,478	119,500	186,830
Prussia.....	7,137	18,012	34,295
Hanover.....	37,173	13,802	5,618
Hanse Towns .....	330,760	355,230	426,949
Holland.....	272,278	233,696	285,452
Other Countries.....	522,516	690,230	945,249
Total.....	1,341,342	1,400,470	1,854,393



## BREADSTUFFS.

The crop of wheat in England appears to be rather below an average, and, as the weather during the progress of harvest work in the southern and midland counties was very changeable, the crop, so far as it had been harvested at the date of our latest advices, had not been secured in fine or even good condition, and was not ready, therefore, for immediate consumption. Beyond damping the produce, the prevailing rains do not seem to have done any great injury to the crops, and, as farmers had forwarded considerable supplies of produce to market, the wheat trade had been in a very inactive state, and prices had given way about 3s. per qr. During the few days preceding the departure of the mail steamer from Liverpool, on Sept. 1, there was more firmness in the trade, arising from the circumstance, partly of the rumors of a short crop in France, changeable weather in Great Britain, and accounts received from this country of heavy rains in the Western States, and of the upward movement of prices here. The statements respecting the short crop in France appear to be greatly exaggerated, for wheat and flour continue to be exported in considerable quantities from French ports to Great Britain. The crop of maize in Roumania has almost entirely failed, and the export has been prohibited from that province. The annexed statement shows the imports of wheat, flour and Indian corn into the United Kingdom during the seven months ending July 31, in each of the last three years:

WHEAT.			
	1864.	1865.	1866.
From Russia..... cwts.	1,603,580	3,510,434	3,988,969
Prussia.....	2,746,198	2,729,900	2,459,902
Denmark.....	469,425	297,112	244,952
Schleswig, Holstein, & Lauenburg.....	181,896	159,211	117,539
Mecklenburg.....	358,254	312,333	455,222
Hanse Towns.....	384,761	267,991	489,720
France.....	437,394	678,791	3,162,206
Turkey, Wallachia, and Moldavia.....	273,238	407,469	300,973
Egypt.....	366,856	.....	8,738
United States.....	5,062,724	405,307	323,160
British North America.....	405,375	101,594	8,789
Other Countries.....	262,583	670,607	2,233,274
Total.....	12,554,284	9,540,749	13,784,435
FLOUR.			
	1864.	1865.	1866.
From Hanse Towns..... cwts.	204,433	140,041	160,477
France.....	1,391,363	1,469,217	2,974,122
United States.....	1,214,343	150,188	168,949
British North America.....	211,828	70,464	6,166
Other Countries.....	68,715	83,899	143,108
Total.....	3,090,682	1,853,809	3,452,822
INDIAN CORN.....	1,408,500	2,645,872	7,633,850

## BRITISH AND IRISH PRODUCE AND MANUFACTURES.

These exports have been very large, the greatest increase being, as regards the United States, Canada and Brazil. Cotton goods and Woolen goods have been shipped in enormous quantities to all quarters of the globe. The following table shows the value of the exports to the United States in the seven months ending July 31:

	1864.	1865.	1866.
Alkali.....	£251,218	£228,807	£544,915
Beer and ale.....	33,268	21,308	39,715
Coals.....	69,667	56,284	51,970
COTTON MANUFACTURES—			
Piece goods.....	1,428,382	831,905	2,232,329
Thread.....	147,124	64,954	210,701
Earthenware and porcelain.....	269,609	207,121	448,750
Haberdashery and millinery.....	675,152	400,069	830,713

<b>HARDWARES AND CUTLERY—</b>			
Knives, forks, &c.....	84,637	76,944	168,706
Anvils, vices, &c.....	62,229	46,440	62,046
Manufactures of German silver.....	206,092	115,455	397,096
<b>LINEN MANUFACTURES—</b>			
Piece goods.....	1,780,499	1,395,392	2,466,273
Thread.....	141,057	78,769	145,347
<b>METALS—</b>			
Iron—Pig, &c.....	199,759	56,097	173,701
Bar, &c.....	620,625	98,530	321,584
Railroad.....	716,532	179,099	486,281
Castings.....	12,138	2,465	10,265
Hoops, sheets and boiler plates.....	198,414	35,411	187,899
Wrought.....	204,994	84,950	137,558
Steel—Unwrought.....	369,406	164,905	388,956
Copper, wrought.....	12,982	20,119	29,089
Lead, pig.....	180,334	25,407	65,643
Tin plates.....	556,205	464,583	874,989
Oliseed.....	45,942	1,744	141,263
Salt.....	21,938	16,094	74,361
<b>SILK MANUFACTURES—</b>			
Broad piece goods.....	65,703	35,422	92,000
Handkerchiefs, scarfs, &c.....	16,722	1,295	6,155
Ribbons.....	27,538	15,176	21,699
Other articles of silk only.....	72,377	65,303	75,778
Other articles mixed with other materials.....	31,788	17,014	42,941
Silks, British.....	9,678	1,119	8,174
Wool.....	37,242	3,152	300
<b>WOOLLEN AND WORSTED MANUFACTURES—</b>			
Cloths of all kinds.....	667,647	238,221	651,404
Carpets and druggets.....	259,989	117,102	451,897
Shawls, rugs, &c.....	58,306	13,016	27,936
Worsted stuffs of wool only, and of wool mixed.....	1,767,384	1,283,617	2,838,995

## PROVISIONS.

The imports in July were much below last year, notwithstanding that prices continued to rule high at the whole of the British markets. The prices of butter, cheese and bacon were at a high point at the date of our latest advices from Great Britain. The imports in the seven months ending July 31, were of the following magnitude :

	1864.	1865.	1866.
Bacon and hams, cwts.....	853,485	464,268	486,988
Beef, salt, cwts.....	236,109	143,850	140,803
Pork, salt, cwts.....	148,908	113,521	131,681
Butter, cwts.....	490,357	554,405	545,480
Cheese, cwts.....	280,317	836,456	271,128
Eggs, number.....	207,790,320	233,706,240	285,765,900
Lard, cwts.....	125,336	81,140	205,530

## LIVE STOCK.

The imports of live stock have fallen off from last year, arising chiefly from the circumstance that the import of stock with Great Britain from Rotterdam and Amsterdam is still prohibited. In England, the cattle disease has almost died out, but the stringent regulations relating to the cattle traffic are still in operation. Scotland has been declared free of disease. The price of butcher's meat is still very high in Great Britain, and the tendency of the quotations is in an upward direction. The annexed figures embrace a period of seven months :

## IMPORTS OF LIVE STOCK INTO GREAT BRITAIN.

	1864.	1865.	1866.
Oxen, bulls and cows.....	64,186	92,116	86,177
Calves.....	23,896	27,475	10,957
Sheep and lambs.....	189,384	342,074	472,545
Swine and hogs.....	26,609	49,422	53,899

## SHIPPING.

During the month of July, and the seven months ending July 30, the

following number of American vessels entered and cleared at ports in the United Kingdom :

	Number.	Tonnage.
Entered in July, 1866.....	32	34,633
do do 1865.....	33	36,739
do do 1864.....	50	51,457
Entered seven months ending July 30, 1866.....	262	267,145
do do do 1865.....	150	163,827
do do do 1864.....	252	283,328
Cleared in July, 1866.....	55	50,070
do do 1865.....	15	15,279
do do 1864.....	30	32,868
Cleared seven months ending July 30, 1866.....	398	333,398
do do do 1865.....	173	171,557
do do do 1864.....	243	268,508

The annexed statement shows the number of vessels, of all nationalities, entered and cleared at ports in the United Kingdom from and to the United States, in the above periods :

	Number.	Tonnage.
Entered in July, 1866.....	148	126,127
do do 1865.....	57	59,959
do do 1864.....	130	109,420
Entered in seven months ending July 30, 1866.....	996	908,173
do do do 1865.....	292	335,982
do do do 1864.....	645	621,258
Cleared in July, 1866.....	116	118,871
do do 1865.....	78	85,184
do do 1864.....	96	101,101
Cleared in seven months ending July 30, 1866.....	855	887,617
do do do 1865.....	444	517,725
do do do 1864.....	733	750,804

## ANALYSES OF RAILROAD REPORTS. No. 14.

### I. Chicago, Burlington and Quincy Railroad.—II. Boston and Maine Railroad.

#### CHICAGO, BURLINGTON AND QUINCY RAILROAD.

The several lines belonging to this company have in the aggregate a length of *four hundred miles* and are as follows :

Main line—Chicago to Quincy.....	miles.	265
Branch line—Galesburg to Burlington.....		40
Peoria branch—Galesburg to Peoria.....		32
Lewiston branch—Yates City to Lewiston.....		30
Old Line—Aurora to Chicago Junction.....		13

Total miles owned and operated by company..... 400

The railroad property of the company, which in its original design, consisted of a road from the junction of the Galena and Chicago Railroad (then so called) about 30 miles from Chicago to Galesburg, 138 miles, now consists of a continuous main line from Chicago to Quincy, 265 miles, and which at Quincy connects with the Hannibal and St. Joseph Railroad extending by its connections (nearly complete) to the Kansas Branch of the Pacific, and which will command a very large share of the business of the northern portion of the United States, which may pass over the route to and from the Western Territories and the Pacific States; and of a branch to Burlington, equally part of a main line between Chicago and that city, where it connects with the Burlington and Missouri Railroad, complete 76 miles and fast approaching completion 56 miles further to near the centre of Southern Iowa, destined also to be a great route across that State; and also of a road from Galesburg to Peoria, 52 miles, with a branch to Lewiston. The business of all these

roads comes upon the main trunk at Galesburg, and passes thence over its length to Chicago. There is also a small part of the original line between Aurora and the junction with the Galena road, 13 miles, not however, of much value. But the two routes to Quincy and Burlington, destined as they are to become great thoroughfares for both business and travel, have great present and greater prospective value; while every mile of road to Peoria and Lewiston also contributes much to the revenue of the Company by reason of the business which they furnish, passing over the main line from Galesburg to Chicago.

The following statements have reference to the operations and revenue of the company for the four financial years ending April 30, 1866.

The rolling stock owned by the company May 1, 1862 and at the close of each subsequent fiscal year is shown in the annexed statement :

	May 1. 1862.	Close of Fiscal Year.— 1862-3.	1863-4.	1864-5.	1865-6.
Locomotive Engines.....	62	86	98	105	111
Passenger Coaches.....	27	30	36	46	54
Baggage, mail and express.....	13	17	24	25	25
Horse, freight and cattle.....	815	999	1,334	1,508	1,639
Platform and coal cars.....	186	200	401	422	442
Drovers, &c., cars.....	22	30	40	86	36

—not including working cars, the stock of which in April, 1866, consisted of 40 gravel, and 44 rubble cars, and 122 hand cars.

The total mileage of trains was in 1863-4, 1,955,519 miles; in 1864-5, 1,963,105 miles and in 1865-6, 2,083,530 miles.

#### TRAFFIC ON THE LINES YEARLY.

The subjoined statements exhibit the details of the east and west passenger and freight business of the company for the last four years.

The number of passengers and the direction of travel, with the aggregate mileage were as shown in the following table :

	1862-63.	1863-64.	1864-65.	1865-66.
Through Passengers—Carried East.....	12,688	15,989	21,360	27,553
“ “ “ “ West.....	15,127½	22,733	28,707	35,186
“ “ “ “ both ways.....	27,815½	38,722	50,067	62,741
Way Passengers— “ East.....	188,863½	262,055	395,328	423,687
“ “ “ “ West.....	185,987	273,148	397,164	453,773
“ “ “ “ both ways.....	374,850½	535,203	792,492	876,460
Total Passengers— “ East.....	201,550½	278,044	416,688	450,246
“ “ “ “ West.....	201,114½	295,881	425,871	488,952
“ “ “ “ both ways.....	402,666	573,925	842,559	939,205
Equivalent num. of Pas. carried 1 mile.....	23,358,939	30,609,865	43,406,92½	49,670,621

The freight traffic for the same years is shown in the following table :

	1862-63.	1863-64.	1864-65.	1865-66.
Tons of freight—carried East.....	580,278	523,594	456,835	494,480
“ “ “ “ carried West.....	197,458	286,676	280,676	327,403
“ “ “ “ carried both ways.....	777,736	809,674	737,511	821,883

—the equivalent number of tons carried one mile having been :

Tons of freight—Carried East.....	81,298,033	78,624,460	66,494,144	65,036,145
“ “ “ “ West.....	26,697,809	38,129,048	41,085,216	48,730,814
“ “ “ “ both ways.....	107,995,842	116,753,508	107,579,360	113,766,959

The tons of freight forwarded from and received at Chicago, and the mileage thereof for the same years, was as follows :

	1862-63.	1863-64.	1864-65.	1865-66.
Tons received at Chicago.....	492,014	497,970	375,590	398,909
Tons forwarded from Chicago.....	131,907	187,882	210,769	251,465
Received and forwarded.....	623,921	625,852	586,359	650,374

—and the mileage thereof was thus, viz. :

Mileage of each ton received.....	77,595,134	74,747,018	62,123,601	59,347,15
“ “ “ “ forwarded.....	23,408,685	34,491,399	37,381,582	44,444,61
Total mileage.....	101,003,819	109,238,317	99,505,183	103,691,79



These statements are exclusive of the company's tonnage, which amounted in 1865 to 162,560 (10,675,598 miles,) and in 1866 to 133,019 (9,827,252 miles.)

## FISCAL OPERATIONS—EARNINGS, EXPENSES, ETC.

The gross earnings and cost of operating, with the net earnings for the same years, are shown in the subjoined statement:

	1862-63. (210 miles.)	1863-64. (293 miles.)	1864-65. (300 miles.)	1865-66. (400 miles.)
Freight earnings .....	\$1,927,944 79	\$2,326,363 58	\$3,395,679 45	\$4,204,740 82
Passenger earnings .....	426,417 82	684,374 82	1,158,596 21	1,757,387 99
Mails and other income .....	58,458 79	79,472 63	123,911 04	213,424 54
Total earnings .....	\$2,412,821 40	\$3,090,211 03	\$4,688,186 70	\$6,175,552 35
Operating expenses .....	1,072,988 78	1,575,395 00	2,436,147 10	3,020,164 78
Net earnings .....	\$1,339,832 62	\$1,514,816 03	\$2,252,039 60	\$3,155,388 57

The following shows the resources of the company from all sources, and the manner of their disbursement:

	1862-63.	1863-64.	1864-65.	1865-66.
Net earnings as above .....	\$1,339,832 62	\$1,514,816 03	\$2,252,039 60	\$3,155,388 57
Interest and exchange .....	10,801 15	.....	14,630 36	30,152 17
Balance from Q. & C. R. R. ....	.....	.....	.....	81,176 06
Balance cr-dit steamer .....	3,525 63	.....	.....	.....
Inc. credit from last year .....	1,296,160 64	604,859 38	1,026,093 11	958,401 03
Total resources .....	\$2,650, 20 04	\$2,119,675 41	\$3,292,763 07	\$4,255, 17 83

—which was disbursed as follows:

Interest on bonds .....	\$324,635 28	\$359,139 90	\$349,025 14	\$421,566 34
Prem. on fractional stock ..	.....	.....	5,491 61	64 88
Taxes, State .....	24,369 62	45,619 26	71,846 74	169,619 96
do Internal .....	15,100 20	38,101 53	176,873 00	322,040 16
Improvements .....	37,148 95	67,413 86	47,485 09	6,668 68
Rents of tracks and depots ..	17,074 98	10,081 00	17,921 60	17,457 92
Locomotive account .....	37,500 00	.....	.....	.....
Transfer office expenses .....	2,600 00	1,600 00	2,000 00	1,583 33
Interest and exchange .....	.....	3,101 35	.....	.....
Dividend May 15 .....	.....	229,544 00	262,844 00	418,825 00
do Nov. 15 .....	203,108 00	229,544 00	519,600 00	503,300 00
Stock distribution .....	946,900 00	.....	745,600 00	1,675,300 00
Transfer to sinking fund .....	437,023 63	109,437 50	102,664 84	129,000 00
Balance to next year .....	604,859 38	1,026,093 11	998,401 03	588,691 11

The stock distributions as above were made at the following dates: November, 1863, 20 per cent., \$946,900; November, 1864, 10 per cent., \$745,600; and November, 1865, 20 per cent., \$1,675,300.—Total, \$3,367,800.

## FINANCIAL CONDITION—GENERAL ACCOUNT.

The balance sheet is dated May 1, and shows as follows for the four years last past:

	1863.	1864.	1865.	1866.
Capital stock .....	\$5,728,640 00	\$6,571,140 00	\$8,376,510 00	\$10,193,010 00
Funded debt, viz.:				
Old bonds convertible into 8 p. cents..	349,000 00	229,000 00	169,000 00	151,000 00
C. B. & Q. R. R. 8 p. ct. convertible..	441,000 00	.....	467,000 00	356,000 00
C. B. & Q. R. R. 8 p. ct. unconvertible	3,034,000 00	3,633,000 00	3,167,000 00	3,169,000 00
C. B. & Q. R. R. 7 per plain bonds..	755,000 00	781,000 00	680,000 00	680,000 00
C. B. & Q. R. R. 2d mort. unconvertible	935,500 00	940,600 00	941,000 00	941,000 00
Scrip issued for N. C. 2d mort. bonds..	588,093 75	544,531 25	500,968 75	457,405 25
Operating accounts, viz.:				
Unclaimed dividends .....	1,349 00	1,223 00	1,252 00	1,201 00
Unpaid accounts and pay rolls .....	18,506 28	178,014 67	89,763 34	71,771 60
Bills payable .....	1,330 00	194,356 24	.....	.....
Due agents and connecting roads .....	275,198 30	192,519 33	440,142 55	131,234 18
Sinking fund .....	437,023 63	546,461 13	649,125 99	778,125 99
Income account credit .....	604,859 38	1,026,093 11	998,401 03	588,691 55
Total debt .....	\$13,179,500 34	\$14,837,833 72	\$16,464,264 66	\$17,518,440 57

## Against which are charged as follows :

Road and Equipment .....	\$12,373,312 78	\$12,927,325 23	\$15,055,252 87	\$15,447,761 72
Materials and fuel on hand.....	170,678 11	531,756 56	587,087 28	395,588 52
Steam ferry and wharf boats.....	17,853 36	.....	.....	26,767 08
Chicago teams.....	.....	.....	.....	4,500 00
Accounts and bills receivable.....	45,037 43	92,106 34	111,778 13	82,116 35
Burl. & M. River R.R. preferred Stock	.....	.....	.....	59,976 59
Due from agents and connecting roads.	126,100 49	159,652 22	296,000 00	115,324 06
Due on account N. Cross Rail road .....	.....	.....	.....	270,000 00
Dividend declared and tax thereon.....	.....	.....	.....	586,473 68
Deposits in N. Y., Bost. and Treasury.	446,508 18	126,998 37	430,521 43	348,317 71
Deposit with Sinking Fund.....	.....	.....	102,664 86	221,664 86
Total credit.....	\$13,179,500 34	\$14,537,538 72	\$16,464,264 66	\$17,518,440 57

## PROPORTIONAL DEDUCTIONS.

The following table shows the cost of the road per mile, the gross earnings, expenses and net earnings per mile, the ratio of expenses to earnings, and of net earnings to cost of road, and the rate of dividend for each of the four last past years :

	1862-63.	1863-64.	1864-65.	1865-66.
Cost of road per mile .....	\$34,086	\$33,307	\$37,634	\$38,619
Gross earnings per mile.....	11,489	10,547	15,927	15,439
Operating expenses per mile.....	5,109	5,376	8,145	7,550
Net earnings per mile .....	6,380	5,171	7,482	7,889
Expenses to earnings per cent.....	44.47	50.97	52.12	48.91
Net earnings to cost of road, per cent.....	10.83	10.87	14.95	20.43
Dividends—cash.....	nine.	nine.	thirteen.	ten.
—stock.....	twenty.	.....	ten.	twenty.

The cost of road is estimated on a length of 363 miles for the two first years, and of 400 miles for the last two years. The earnings and expenses are estimated on lengths of 210 (average), 293, 300 and 400 miles for the years respectively as shown in the original returns. These lengths include the 30 miles of the Galena & Chicago R. R. in use before the completion of the Chicago extension in May, 1864, and for the last year the Quincy line 100 miles.

## PRICES OF STOCK AT NEW YORK.

The monthly range in the price of shares at the New York Stock Board for the four years ending, April 30, 1866, has been as shown in the following table :

	1862-3.	1863-4.	1864-5.	1865-6.
May.....	64½ @ 73	108 @ 120	126 @ 142	102 @ 110
June.....	75 @ 80	115 @ 116	126½ @ 132	104 @ 108
July.....	74½ @ 78½	114 @ 116½	126 @ 129	109½ @ 112
August.....	78 @ 87	115 @ 126½	127 @ 131	111 @ 113
September.....	85½ @ 96½	120 @ 123	117 @ 127	112 @ 125
October.....	100 @ 119	122½ @ 131	111 @ 131½	124 @ 130
November.....	83 @ 116	116½ @ 124½	115 @ 120	110½ @ 115
December.....	86½ @ 88	115 @ 117½	116½ @ 118	113 @ 115
January.....	99 @ 111½	118 @ 129	114 @ 120	109½ @ 114
February.....	105 @ 110	122 @ 133	115 @ 120	112 @ 112
March.....	106 @ 110	131½ @ 146	100 @ 118	113½ @ 115
April.....	107½ @ 112½	132 @ 149	103 @ 117	115 @ 117½
Year.....	64½ @ 119	108 @ 149	100 @ 142	102 @ 130

## BOSTON AND MAINE RAILROAD.

The Boston and Maine Railroad is one of the two great lines (the Eastern Railroad being the other) which, in connection with the Portland, Saco and Portsmouth Railroad, extends from Boston, Mass., to Portland, Me. The roads owned by the company are as follows :

Maine Line, Boston, Mass., to South Berwick Junction, Me.....	74.26 miles
Branch Line, Junction (3 m. N. Boston) to Medford.....	2.23
do Junction (26 m. N. Boston) to State Line.....	3.61
do Junction (71 m. N. Boston) to Great Falls.....	2.95— 8.79 miles
Lines owned absolutely by B. & M. RR. Co.....	83.05 miles

Danvers RR., S. Reading (9 m. N. Boston) to N. Danvers.....	9.20	
Newburyport RR., S. Danvers to Bradford & Newburyport .....	26.97	37.17 miles
Lines owned and leased by B. & M. R. R. Co.....		119.23 miles

On the main line and branches of the Boston and Maine Railroad there are 52 miles of second track and siding, and on the Danvers and Newburyport Railroads about 5 miles. Including this, the roads owned and leased by the company have a length of equivalent single track of 176 miles.

Of the main line, 35.78 miles are in Massachusetts, 37.22 miles in New Hampshire, and 1.26 mile in Maine.

The Danvers and Newburyport railroads, in connection with the southern part of the Boston and Maine Railroad, form a continuous line of about 40 miles from Boston to Newburyport, with a branch from Georgetown to Bradford. Both these roads are held under one hundred years' leases—the first from 1853, and the latter from 1860, under such arrangements that the Boston and Maine Railroad Company have no annual rents to pay for their use.

The Boston and Maine Company also operate the Dover and Winnepisseogee (late Cochecho) Railroad under a business contract at an annual rental of \$29,000, payable semi-annually—the contract, dated November 1, 1863, to run fifty years from that date. The rolling stock of this company consisted of 3 locomotives, 6 passenger and baggage, 45 freight, and 5 hand-cars, and was purchased by the Boston and Maine Company for the sum of \$40,075.

The Portland, Saco and Portsmouth Railroad is leased jointly by the Boston and Maine and the Eastern Companies for ninety-nine years, from January 28, 1843, for an annual sum equal to 6 per cent. on its cost—the two companies sharing equally in the profit and loss of operating.

The rolling stock owned by the company on the 31st of May, 1866 to 1866, has been as follows :

	1860.	1861.	1862.	1863.	1864.	1865.	1866.
Locomotives.....	32	32	36	33	36	37	37
Passenger-cars.....	54	54	53	53	56	63	63
Baggage-cars.....	18	18	19	19	19	19	19
Freight-cars.....	587	587	585	587	629	706	772
Total cars.....	659	659	657	656	704	845	854

This enumeration includes the engines and cars used in the company's business on the Portland, Saco and Portsmouth, and the Dover and Winnepisseogee Railroads.

#### OPERATIONS ON THE ROAD—EARNINGS, ETC.

The following statement shows the miles run by passenger and freight engines with trains, the number of passengers and of tons of freight carried, and the equivalent mileage thereof for the six years closing May 31, 1866 :

	1861.	1862.	1863.	1864.	1865.	1866.
Mileage passenger.....	449,152	409,437	454,669	452,688	470,707	479,906
" freight.....	184,019	168,373	176,805	210,144	243,184	239,654
" total.....	633,171	577,810	631,474	662,832	714,191	719,560
Passengers.....	1,868,797	1,620,855	1,845,812	2,047,812	2,658,385	2,899,432
" 1 mile.....	28,308,103	24,642,586	27,878,135	31,519,472	38,020,812	41,031,907
Tons of freight.....	273,440	199,369	239,718	271,309	275,149	310,396
" 1 mile.....	7,551,842	5,552,110	6,433,817	7,991,209	9,046,959	9,689,911

fore the war and the suspension of specie payments. At that period two hundred millions were enough. During the last five years we have vastly expended our financial operations, our mercantile enterprises, and our productive industry. There is more need therefore, and more use for the circulating medium. The amount which is now required has been estimated at three hundred millions, and it probably could not safely exceed four hundred millions without being reduced in purchasing power below the level in coin.

In England the average amount of current money is under 250 millions of dollars; in France under 300 millions. But the habits of various countries differ so widely as to the methods of doing business and of economising currency, that no certain conclusion can be reached, save by experience. From what has been said, however, three or four conclusions are sufficiently clear. First, a large amount of our 800 millions of active paper money must be withdrawn before we can get down to the level of specie payments. Secondly, if high prices necessitate the use of a large volume of currency, and redundant currency therefore puts prices up, the converse is true, and a permanently contracted currency will produce permanently lower prices for real estate, merchandise, and all other commodities. Thirdly, the contraction being gradual, and extending itself over a series of years, the shrinkage in prices will be almost insensible, or may, at any rate, be adjusted with such quietude as to do but little harm. Fourthly, the debtor classes of our population, who will suffer by contraction, are those which are mostly sensitively exposed to pecuniary injury, and which suffer most severely under it. Hence the necessity for caution as to every successive step we advance in the path of contraction.

In view of these facts there is the most anxious watchfulness over any of Mr. McCulloch's movements which seem to look towards interference with the currency. His power to call in greenbacks is limited by Congress to 48 millions a year. He may withdraw less than this sum, but he is not permitted to withdraw more. But there are other parts of the currency over which Congress has left him unlimited power. The compound interest legal tenders he can withdraw as fast as he can buy them at par, first cost. If the price were not two per cent above par he would have the ability to act on the currency by bringing these notes, which are largely held by the banks as reserve instead of other legal tenders. Being so held as reserve they perform one of the functions of currency, and thus do the duty of a certain amount of greenbacks, which are released for active use in the current of circulating money. We doubt the policy of paying off the Clearing-House certificates, which have been held by the banks at four per cent. interest. Forty five millions of currency are thus being thrown into the banks, and they will be tempted to lower their reserve, and either to lend their surplus funds in discounting rashly, or to invest for speculative purposes. This lowering of the reserve is obviously a weakening of the position of the banks. At present they hold considerably more of legal tenders than the twenty-five per cent. reserve required by law. Some of the reasons why we have had so swift a recuperative movement after the monetary spasms which have visited us, is to be found in this extraordinary strength in the reserve funds which constitute the buttresses and bulwarks of our financial edifice. Two of the most powerful inducements which have led and enabled the banks to strengthen



themselves with so ample a reserve, are found in the compound interest notes and the Clearing-House certificates. We have, consequently, grave doubts whether it is safe and wise at the present moment for the Secretary of the Treasury thus to disturb the currency. Contraction is a good policy, a necessary policy, but it must be timely, not at the active period of the year, and it should be slow. At the same time every inducement should be held out to our banks to increase this reserve.

### TRADE OF GREAT BRITAIN AND THE UNITED STATES.

#### COTTON, BREADSTUFFS, PROVISIONS, ETC.

Notwithstanding the Bank rate of discount was at 10 per cent. during the month of July, the English Board of Trade returns for that month, which we have just received, present many favorable features. As regards that country, the results show most conclusively the importance of the trade between us and Great Britain, although it must be borne in mind that transactions would not have been on the extensive scale reported had no fears been entertained in England that higher rates of import duty might be imposed in this country. Future business has, therefore, been anticipated, and for that reason, in part, is so extensive a trade exhibited during the months of May, June and July.

The declared value of the imports of British and Irish produce and manufactures during the seven months ending July 31 was £107,815,664, against £88,242,048 last year, and £92,441,950 in 1864. There is, therefore, an increase during the present year, as compared with 1865, of £19,600,000, and of £15,400,000 as compared with the corresponding period in 1864. For each of the seven months in each of the last three years the figures stand thus :

	1864.	1865.	1866.
January.....	£10,413,586	£10,489,339	£14,354,748
February.....	12,698,121	11,376,214	15,116,063
March.....	13,555,674	13,770,154	17,520,354
April.....	13,225,039	12,071,111	15,866,414
May.....	14,176,640	13,194,758	15,870,131
June.....	13,978,526	13,227,072	14,630,120
July.....	14,394,364	14,113,410	14,957,834
Total.....	£92,441,950	£88,242,048	£107,815,664

The computed real value of the principal articles imported into the United Kingdom, during the six months ending June 30, was rather more than £30,000,000 sterling greater than in the corresponding period in 1865, and £16,600,000 in excess of 1864. This great increase is chiefly to be accounted for by the augmented importation of cotton from this country. The figures for each month are subjoined :

	1864.	1865.	1866.
In January.....	£7,520,356	£6,398,922	£9,817,564
February.....	13,214,541	12,891,252	16,610,159
March.....	16,396,928	13,005,394	19,891,304
April.....	17,587,565	13,078,755	22,455,968
May.....	22,392,691	14,595,334	23,224,762
June.....	21,498,185	15,407,688	23,242,701
Total.....	£98,610,176	£75,340,872	£115,273,358

As regards the United States, the value of the outward trade in British and Irish produce and manufactures from Great Britain, for the month of June and for the six months ending June 30, was as under :

For June.	1864.	1865.	1866.
To Atlantic ports, Northern.....	£1,503,023	£1,189,363	£1,832,901
Southern.....	10,488	614	57,059
Pacific ports .....	195,485	69,527	98,403
Total.....	£1,708,946	£1,259,504	£1,978,363
For the six months.	1864.	1865.	1866.
To Atlantic ports, Northern.....	£11,435,269	£5,965,101	£14,279,198
Southern .....	65,951	22,562	559,274
Pacific ports .....	526,263	227,274	389,148
Total .....	£12,027,483	£6,214,937	£15,228,220

## COTTON.

The imports of cotton into the United Kingdom in July were 600,000 cwts. less than in the previous month. There was a diminution of 354,000 cwts. in the receipts from this country; and of nearly 220,000 cwts. in the importation from the East Indies. The aggregate supply received was 1,075,244 cwts., of which 404,113 cwts. were from this country, and 509,942 cwts. from the East Indies. In the corresponding month last year the receipts from the United States, including the supplies received from the Bahamas, Bermudas, and Mexico, which were mostly United States cotton, were only 45,000 cwts., and in 1864, only 54,400 bales. Annexed are the figures for the seven months:

## IMPORTS OF COTTON INTO GREAT BRITAIN IN SEVEN MONTHS ENDING JULY 31.

	1864.	1865.	1866.
From United States.....cwts.	£98,824	£82,963	£2,635,202
Bahamas and Bermudas.....	186,858	155,833	5,931
Mexico .....	157,086	249,509	3,145
Brazil.....	218,070	268,767	450,166
Turkey.....	138,558	155,826	82,504
Egypt.....	796,853	904,319	690,267
British India.....	1,889,997	1,411,296	2,888,141
China.....	483,328	256,928	13,469
Other countries.....	155,050	208,621	164,134
Total.....	£4,124,624	£3,694,062	£7,932,986

The subjoined statement shows the computed real value of the imports of cotton into the United Kingdom during the six months ending June 30 :

	1864.	1865.	1866.
From United States .....	£1,345,954	£534,213	£25,269,971
Bahamas and Bermudas.....	2,038,809	1,329,109	43,486
Mexico.....	1,836,733	1,816,660	28,591
Brazil.....	2,362,974	1,750,714	3,299,310
Turkey.....	1,296,529	747,676	490,221
Egypt.....	8,952,379	6,193,841	5,466,635
British India.....	15,023,536	5,880,043	11,737,547
China.....	3,570,152	957,866	.....
Other countries.....	1,531,226	1,277,450	1,013,000
Total.....	37,858,292	20,478,572	47,348,759

The exports of cotton from the United Kingdom are on a comparatively small scale, considering the greater abundance of supplies in the Liverpool market, and the more favorable terms on which exporters could be supplied. The unsettled state of Germany during the past six months of the year has been a serious drawback to this as well as to other branches of trade. In July the export was confined to 333,440 cwts., against 218,105 cwts. in July last year. Our latest advices from Liverpool, however, report an increasing demand, and future returns will probably show more satisfactory results. In the seven months ending July 31, the exports of cotton from Great Britain were as under :

	1864.	1865.	1866.
To Russia.....cwts	171,478	119,500	186,830
Prussia.....	7,187	18,012	34,295
Hanover.....	37,173	13,802	5,618
Hanse Towns.....	330,760	355,230	426,949
Holland.....	272,278	233,696	285,452
Other Countries.....	522,516	660,230	945,249
Total.....	1,341,342	1,400,470	1,864,333

## BREADSTUFFS.

The crop of wheat in England appears to be rather below an average, and, as the weather during the progress of harvest work in the southern and midland counties was very changeable, the crop, so far as it had been harvested at the date of our latest advices, had not been secured in fine or even good condition, and was not ready, therefore, for immediate consumption. Beyond damping the produce, the prevailing rains do not seem to have done any great injury to the crops, and, as farmers had forwarded considerable supplies of produce to market, the wheat trade had been in a very inactive state, and prices had given way about 3s. per qr. During the few days preceding the departure of the mail steamer from Liverpool, on Sept. 1, there was more firmness in the trade, arising from the circumstance, partly of the rumors of a short crop in France, changeable weather in Great Britain, and accounts received from this country of heavy rains in the Western States, and of the upward movement of prices here. The statements respecting the short crop in France appear to be greatly exaggerated, for wheat and flour continue to be exported in considerable quantities from French ports to Great Britain. The crop of maize in Roumania has almost entirely failed, and the export has been prohibited from that province. The annexed statement shows the imports of wheat, flour and Indian corn into the United Kingdom during the seven months ending July 31, in each of the last three years:

WHEAT.			
	1864.	1865.	1866.
From Russia..... cwt.	1,603,580	3,510,434	3,988,969
Prussia.....	2,746,198	2,729,900	2,459,902
Denmark.....	469,425	297,112	244,952
Schleswig, Holstein, & Lauenburg.....	181,896	159,211	117,530
Mecklenburg.....	358,254	312,333	455,232
Hanse Towns.....	384,761	267,991	489,720
France.....	437,394	678,791	3,102,206
Turkey, Wallachia, and Moldavia.....	273,238	407,469	300,973
Egypt.....	366,856	.....	8,738
United States.....	5,062,724	405,307	323,160
British North America.....	405,375	101,594	8,789
Other Countries.....	262,583	670,607	2,233,274
Total.....	12,554,284	9,540,749	13,784,435
FLOUR.			
	1864.	1865.	1866.
From Hanse Towns..... cwt.	204,433	140,041	160,477
France.....	1,391,363	1,409,217	2,971,122
United States.....	1,214,343	150,188	168,949
British North America.....	211,828	7	6,166
Other Countries.....	68,715	4	143,108
Total.....	3,090,682	809	3,452,822
INDIAN CORN.....	1,408,500	43,572	7,653,850

## BRITISH AND IRISH PRODUCE AND MANUFACTURES.

These exports have been very large, the greatest increase being, as regards the United States, Canada and Brazil. Cotton goods and Woolen goods have been shipped in enormous quantities to all quarters of the globe. The following table shows the value of the exports to the United States in the seven months ending July 31:

	1864.	1865.	1866.
Alkali.....	£251,218	£228,807	£244,915
Beer and ale.....	33,268	21,308	39,715
Coals.....	69,067	56,284	51,970
COTTON MANUFACTURES—			
Piece goods.....	1,428,382	831,905	2,232,329
Thread.....	147,124	64,954	210,701
Earthenware and porcelain.....	269,609	207,121	448,750
Haberdashery and millinery.....	675,153	400,069	830,713

**HARDWARES AND CUTLERY—**

Knives, forks, &c.....	84,637	76,944	163,706
Anvils, vices, &c.....	62,239	46,440	62,046
Manufactures of German silver.....	265,092	115,453	397,066

**LINEN MANUFACTURES—**

Piece goods.....	1,780,499	1,395,362	2,466,273
Thread.....	141,037	78,769	145,247

**METALS—**

<b>Iron—</b> Pig, &c.....	199,759	56,097	173,701
Bar, &c.....	620,625	93,530	321,584
Railroad.....	716,532	179,099	486,281
Castings.....	12,138	2,465	10,295
Hoops, sheets and boiler plates.....	198,414	35,411	187,839
Wrought.....	204,994	84,950	137,558
<b>Steel—</b> Unwrought.....	369,406	164,905	388,956
Copper, wrought.....	12,982	20,119	29,039
Lead, pig.....	180,334	25,407	65,642
Tin plates.....	556,205	464,583	874,989
Oilseed.....	45,942	1,744	141,268
Salt.....	21,938	16,094	74,261

**SILK MANUFACTURES—**

Broad piece goods.....	65,703	35,422	92,000
Handkerchiefs, scarfs, &c.....	16,722	1,296	6,155
Ribbons.....	27,538	15,176	24,699
Other articles of silk only.....	72,377	65,303	75,778
Other articles mixed with other materials.....	31,788	17,014	42,941
Spirits, British.....	9,678	1,119	8,174
Wool.....	37,242	3,152	300

**WOOLLEN AND WORSTED MANUFACTURES—**

Cloths of all kinds.....	667,647	238,221	651,404
Carpets and druggets.....	259,989	117,102	451,897
Shawls, rugs, &c.....	58,306	13,016	27,936
Worsted stuffs of wool only, and of wool mixed.....	1,767,384	1,283,617	2,338,995

**PROVISIONS.**

The imports in July were much below last year, notwithstanding that prices continued to rule high at the whole of the British markets. The prices of butter, cheese and bacon were at a high point at the date of our latest advices from Great Britain. The imports in the seven months ending July 31, were of the following magnitude :

	1864.	1865.	1866.
Bacon and hams, cwts.....	853,485	464,298	486,988
Beef, salt, cwts.....	236,109	143,850	140,803
Pork, salt, cwts.....	148,908	113,521	131,681
Butter, cwts.....	490,357	551,405	545,480
Cheese, cwts.....	289,317	336,456	271,128
Eggs, number.....	207,791,320	233,706,240	285,765,960
Lard, cwts.....	125,336	81,140	205,530

**LIVE STOCK.**

The imports of live stock have fallen off from last year, arising chiefly from the circumstance that the import of stock with Great Britain from Rotterdam and Amsterdam is still prohibited. In England, the cattle disease has almost died out, but the stringent regulations relating to the cattle traffic are still in operation. Scotland has been declared free of disease. The price of butcher's meat is still very high in Great Britain, and the tendency of the quotations is in an upward direction. The annexed figures embrace a period of seven months :

**IMPORTS OF LIVE STOCK INTO GREAT BRITAIN.**

	1864.	1865.	1866.
Oxen, bulls and cows.....	64,186	92,116	86,177
Calves.....	23,396	27,475	10,957
Sheep and lambs.....	189,334	312,074	472,545
Swine and hogs.....	26,609	49,422	33,909

**SHIPPING.**

During the month of July, and the seven months ending July 30, the



following number of American vessels entered and cleared at ports in the United Kingdom:

	Number.	Tonnage.
Entered in July, 1866.....	33	34,633
do 1865.....	33	36,739
do 1864.....	50	51,457
Entered seven months ending July 30, 1866.....	262	267,145
do do do 1865.....	150	163,327
do do do 1864.....	252	283,328
Cleared in July, 1866.....	55	50,070
do 1865.....	15	15,279
do 1864.....	30	32,968
Cleared seven months ending July 30, 1866.....	388	333,398
do do do 1865.....	173	171,557
do do do 1864.....	243	268,508

The annexed statement shows the number of vessels, of all nationalities, entered and cleared at ports in the United Kingdom from and to the United States, in the above periods:

	Number.	Tonnage.
Entered in July, 1866.....	148	126,127
do 1865.....	57	59,959
do 1864.....	130	109,420
Entered in seven months ending July 30, 1866.....	996	908,173
do do do 1865.....	292	335,982
do do do 1864.....	645	621,251
Cleared in July, 1866.....	116	118,871
do 1865.....	78	85,184
do 1864.....	96	101,101
Cleared in seven months ending July 30, 1866.....	855	887,617
do do do 1865.....	444	517,725
do do do 1864.....	733	750,804

## ANALYSES OF RAILROAD REPORTS. No. 14.

### I. Chicago, Burlington and Quincy Railroad.—II. Boston and Maine Railroad.

#### CHICAGO, BURLINGTON AND QUINCY RAILROAD.

The several lines belonging to this company have in the aggregate a length of *four hundred* miles and are as follows:

Main line—Chicago to Quincy.....	miles.	265
Branch line—Galesburg to Burlington.....		40
Peoria branch—Galesburg to Peoria.....		52
Lewiston branch—Yates City to Lewiston.....		30
Old Line—Aurora to Chicago Junction.....		13

Total miles owned and operated by company..... 400

The railroad property of the company, which in its original design, consisted of a road from the junction of the Galena and Chicago Railroad (then so called) about 30 miles from Chicago to Galesburg, 138 miles, now consists of a continuous main line from Chicago to Quincy, 265 miles, and which at Quincy connects with the Hannibal and St. Joseph Railroad extending by its connections (nearly complete) to the Kansas Branch of the Pacific, and which will command a very large share of the business of the northern portion of the United States, which may pass over the route to and from the Western Territories and the Pacific States; and of a branch to Burlington, equally part of a main line between Chicago and that city, where it connects with the Burlington and Missouri Railroad, complete 76 miles and fast approaching completion 56 miles further to near the centre of Southern Iowa, destined also to be a great route across that State; and also of a road from Galesburg to Peoria, 52 miles, with a branch to Lewiston. The business of all these

roads comes upon the main trunk at Galesburg, and passes thence over its length to Chicago. There is also a small part of the original line between Aurora and the junction with the Galena road, 13 miles, not however, of much value. But the two routes to Quincy and Burlington, destined as they are to become great thoroughfares for both business and travel, have great present and greater prospective value; while every mile of road to Peoria and Lewiston also contributes much to the revenue of the Company by reason of the business which they furnish, passing over the main line from Galesburg to Chicago.

The following statements have reference to the operations and revenue of the company for the four financial years ending April 30, 1866.

The rolling stock owned by the company May 1, 1862 and at the close of each subsequent fiscal year is shown in the annexed statement :

	May 1. 1862.	Close of Fiscal Year.—			
	1862-3.	1863-4.	1864-5.	1865-6.	
Locomotive Engines.....	62	86	98	105	111
Passenger Coaches.....	27	30	36	46	54
Baggage, mail and express.....	13	17	24	25	25
Horse, freight and cattle.....	815	999	1,334	1,508	1,639
Platform and coal cars.....	186	200	401	422	442
Drovers, &c., cars.....	22	30	40	36	36

—not including working cars, the stock of which in April, 1866, consisted of 40 gravel, and 44 rubble cars, and 122 hand cars.

The total mileage of trains was in 1863-4, 1,955,519 miles; in 1864-5, 1,963,105 miles and in 1865-6, 2,083,580 miles.

#### TRAFFIC ON THE LINES YEARLY.

The subjoined statements exhibit the details of the east and west passenger and freight business of the company for the last four years.

The number of passengers and the direction of travel, with the aggregate mileage were as shown in the following table :

	1862-63.	1863-64.	1864-65.	1865-66.
Through Passengers—Carried East.....	12,688	15,989	21,360	27,555
“ “ “ “ West.....	15,127½	22,733	28,707	35,186
“ “ “ “ both ways.....	27,815½	38,722	50,067	62,741
Way Passengers— “ East.....	188,863½	262,055	395,328	422,687
“ “ “ “ West.....	185,987	273,148	397,164	453,773
“ “ “ “ both ways.....	374,850½	535,203	792,492	876,460
Total Passengers— “ East.....	201,550½	278,044	416,688	450,246
“ “ “ “ West.....	201,114½	295,881	425,871	488,952
“ “ “ “ both ways.....	402,666	573,925	842,559	939,205
Equivalent num. of Pas. carried 1 mile.....	23,358,939	30,609,865	43,406,921	49,670,621

The freight traffic for the same years is shown in the following table :

	1862-63.	1863-64.	1864-65.	1865-66.
Tons of freight—carried East.....	580,278	523,594	456,835	494,480
“ “ “ “ West.....	197,458	286,676	280,676	327,403
“ “ “ “ both ways.....	777,736	809,674	737,511	821,883

—the equivalent number of tons carried one mile having been :

Tons of freight—Carried East.....	81,298,033	78,624,460	66,494,144	65,036,145
“ “ “ “ West.....	26,697,809	38,129,048	41,085,216	48,730,814
“ “ “ “ both ways.....	107,995,942	116,753,508	107,579,360	113,766,959

The tons of freight forwarded from and received at Chicago, and the mileage thereof for the same years, was as follows :

	1862-63.	1863-64.	1864-65.	1865-66.
Tons received at Chicago.....	492,014	437,970	375,590	398,909
Tons forwarded from Chicago.....	131,907	187,882	210,769	251,465
Received and forwarded.....	623,921	625,852	586,359	650,374

—and the mileage thereof was thus, viz. :

Mileage of each ton received.....	77,595,134	74,747,018	62,123,601	59,247,15
“ “ “ “ forwarded.....	23,408,685	34,491,299	37,821,582	44,444,64
Total mileage.....	101,003,819	109,238,317	99,945,183	103,691,79

These statements are exclusive of the company's tonnage, which amounted in 1865 to 162,560 (10,675,598 miles,) and in 1866 to 133,019 (9,827,252 miles.)

## FISCAL OPERATIONS—EARNINGS, EXPENSES, ETC.

The gross earnings and cost of operating, with the net earnings for the same years, are shown in the subjoined statement:

	1862-63. (210 miles.)	1863-64. (293 miles.)	1864-65. (300 miles.)	1865-66. (400 miles.)
Freight earnings	\$1,927,944 79	\$2,326,363 58	\$3,395,679 45	\$4,204,740 82
Passenger earnings	426,417 82	684,374 82	1,158,596 21	1,757,387 99
Mails and other income	58,458 79	79,472 63	133,911 04	213,424 54
Total earnings	\$2,412,821 40	\$3,090,211 03	\$4,688,186 70	\$6,175,553 35
Operating expenses	1,072,988 78	1,575,395 00	2,436,147 10	3,020,161 78
Net earnings	\$1,339,832 62	\$1,514,816 03	\$2,252,039 60	\$3,155,388 57

The following shows the resources of the company from all sources, and the manner of their disbursement:

	1862-63.	1863-64.	1864-65.	1865-66.
Net earnings as above	\$1,339,832 62	\$1,514,816 03	\$2,252,039 60	\$3,155,388 57
Interest and exchange	10,801 15		14,630 36	30,152 17
Balance from Q. & C. R. R.				81,176 06
Balance credit steamer	3,525 63			
Inc. credit from last year	1,296,160 64	604,859 38	1,026,093 11	988,401 03
Total resources	\$2,650,304 04	\$2,119,675 41	\$3,292,763 07	\$4,255,178 83

—which was disbursed as follows:

	1862-63.	1863-64.	1864-65.	1865-66.
Interest on bonds	\$324,635 28	\$359,139 90	\$349,025 14	\$421,566 34
Prem. on fractional stock			8,491 61	64 88
Taxes, State	24,369 62	45,619 36	71,846 74	169,619 96
do Internal	15,100 20	38,101 33	176,873 00	322,040 16
Improvements	37,148 95	67,413 86	47,485 09	6,668 68
Rents of tracks and depots	17,074 98	10,081 00	17,921 60	17,437 92
Locomotive account	37,500 00	1,600 00	2,000 00	1,583 33
Transfer office expenses	2,600 00	3,101 35		
Interest and exchange		229,544 00	262,544 00	418,825 00
Dividend May 15	23,108 00	229,544 00	519,600 00	503,300 00
do Nov. 15	946,900 00		745,600 00	1,675,300 00
Stock distribution	437,023 63	109,437 50	102,664 84	129,000 00
Transfer to sinking fund	604,859 38	1,026,093 11	998,401 03	588,691 75
Balance to next year				

The stock distributions as above were made at the following dates: November, 1863, 20 per cent., \$946,900; November, 1864, 10 per cent., \$745,600; and November, 1865, 20 per cent., \$1,675,300.—Total, \$3,367,800.

## FINANCIAL CONDITION—GENERAL ACCOUNT.

The balance sheet is dated May 1, and shows as follows for the four years last past:

	1863.	1864.	1865.	1866.
Capital stock	\$5,738,640 00	\$6,571,140 00	\$8,376,510 00	\$10,193,010 00
Funded debt, viz.:				
Old bonds convertible into 8 p. cents.	349,000 00	229,000 00	169,000 00	151,000 00
C. B. & Q. R. R. 8 p. ct. convertible	441,000 00	3,633,000 00	467,000 00	356,000 00
C. B. & Q. R. R. 8 p. ct. unconvertible	3,034,000 00		3,167,000 00	3,169,000 00
C. B. & Q. R. R. 7 per plain bonds	755,000 00	781,000 00	680,000 00	680,000 00
C. B. & Q. R. R. 2d mort. unconvertible	985,500 00	940,600 00	941,000 00	941,000 00
Scrip issued for N. C. 2d mort. bonds	588,093 75	544,531 25	500,968 75	457,405 25
Operating accounts, viz.:				
Unclaimed dividends	1,349 00	1,223 00	1,352 00	1,301 00
Unpaid accounts and pay rolls	18,806 28	178,014 67	83,763 34	71,771 69
Bills payable	1,330 00	194,356 24		
Due agents and connecting roads	275,198 30	192,519 32	440,142 55	131,234 18
Sinking fund	437,023 63	546,461 13	649,125 99	778,125 99
Income account credit	604,859 38	1,026,093 11	988,401 03	588,691 75
Total debt	\$13,179,500 34	\$14,837,538 72	\$16,464,264 66	\$17,518,440 57

Against which are charged as follows :

Road and Equipment .....	\$12,373,312 78	\$13,927,325 23	\$15,055,252 87	\$15,447,761 72
Materials and fuel on hand .....	170,678 11	531,756 56	537,057 28	895,588 53
Steam ferry and wharf boats .....	17,853 36	.....	.....	26,767 08
Chicago teams .....	.....	.....	.....	4,500 00
Accounts and bills receivable .....	45,087 43	92,106 34	111,778 13	82,116 35
Burl. & M. River R.R. preferred Stock	.....	.....	.....	59,976 59
Due from agents and connecting roads .....	196,100 49	159,652 22	236,090 00	115,324 06
Due on account N. Cross Railroad .....	.....	.....	.....	270,000 00
Dividend declared and tax thereon .....	.....	.....	.....	536,473 68
Deposits in N. Y., Bost. and Treasury .....	446,508 18	126,998 37	420,521 43	348,317 71
Deposit with Sinking Fund .....	.....	.....	102,664 86	221,664 86

Total credit..... \$13,179,500 34 \$14,837,838 72 \$16,464,264 66 \$17,515,440 57

#### PROPORTIONAL DEDUCTIONS.

The following table shows the cost of the road per mile, the gross earnings, expenses and net earnings per mile, the ratio of expenses to earnings, and of net earnings to cost of road, and the rate of dividend for each of the four last past years :

	1862-63.	1863-64.	1864-65.	1865-66.
Cost of road per mile .....	\$34,086	\$38,367	\$37,633	\$38,619
Gross earnings per mile .....	11,489	10,547	15,627	15,439
Operating expenses per mile .....	5,109	5,376	8,145	7,550
Net earnings per mile .....	6,380	5,171	7,482	7,889
Expenses to earnings per cent. ....	44 47	50 97	52 12	48 91
Net earnings to cost of road, per cent. ....	10 83	10 87	14 95	20 43
Dividends—cash .....	nine.	nine.	thirteen.	ten.
—stock .....	twenty.	.....	ten.	twenty.

The cost of road is estimated on a length of 363 miles for the two first years, and of 400 miles for the last two years. The earnings and expenses are estimated on lengths of 210 (average), 293, 300 and 400 miles for the years respectively as shown in the original returns. These lengths include the 30 miles of the Galena & Chicago R. R. in use before the completion of the Chicago extension in May, 1864, and for the last year the Quincy line 100 miles.

#### PRICES OF STOCK AT NEW YORK.

The monthly range in the price of shares at the New York Stock Board for the four years ending, April 30, 1866, has been as shown in the following table :

	1862-3.	1863-4.	1864-5.	1865-6.
M y.....	64½ @ 73	105 @ 120	126 @ 142	102 @ 110
June.....	75 @ 80	115 @ 116	126½ @ 132	104 @ 103
July.....	74½ @ 78½	114 @ 116½	126 @ 132	109½ @ 112
August.....	78 @ 87	115 @ 126½	127 @ 131	111 @ 113
September.....	85½ @ 96½	120 @ 123	117 @ 127	112 @ 125
October.....	100 @ 119	122½ @ 131	111 @ 135	124 @ 130
November.....	88 @ 116	116½ @ 124½	115 @ 120	110½ @ 115
December.....	86½ @ 88	115 @ 117½	116½ @ 118	113 @ 115
January.....	99 @ 111½	118 @ 129	114 @ 120	109½ @ 114
February.....	105 @ 110	122 @ 133	115 @ 120	112 @ 112
March.....	106 @ 110	131½ @ 146	100 @ 118	113½ @ 115
April.....	107½ @ 112½	132 @ 149	103 @ 117	115 @ 117½
Year.....	64½ @ 119	108 @ 149	100 @ 142	102 @ 130

#### BOSTON AND MAINE RAILROAD.

The Boston and Maine Railroad is one of the two great lines (the Eastern Railroad being the other) which, in connection with the Portland, Saco and Portsmouth Railroad, extends from Boston, Mass., to Portland, Me. The roads owned by the company are as follows :

Maine Line, Boston, Mass., to South Berwick Junction, Me.....	74.26 miles
Branch Line, Junction (3 m. N. Boston) to Medford.....	2.23
do Junction (26 m. N. Boston) to State Line.....	3.61
do Junction (71 m. N. Boston) to Great Falls.....	2.95— 8.79 miles
Lines owned absolutely by B. & M. RR. Co.....	83.05 miles



Danvers RR., S. Reading (9 m. N. Boston) to N. Danvers..... 9.20  
 Newburyport RR., S. Danvers to Bradford & Newburyport ..... 26.97— 37.17 miles

Lines owned and leased by B. & M. R. R. Co..... 119.22 miles

On the main line and branches of the Boston and Maine Railroad there are 52 miles of second track and siding, and on the Danvers and Newburyport Railroads about 5 miles. Including this, the roads owned and leased by the company have a length of equivalent single track of 176 miles.

Of the main line, 35.78 miles are in Massachusetts, 37.22 miles in New Hampshire, and 1.26 mile in Maine.

The Danvers and Newburyport railroads, in connection with the southern part of the Boston and Maine Railroad, form a continuous line of about 40 miles from Boston to Newburyport, with a branch from Georgetown to Bradford. Both these roads are held under one hundred years' leases—the first from 1853, and the latter from 1860, under such arrangements that the Boston and Maine Railroad Company have no annual rents to pay for their use.

The Boston and Maine Company also operate the Dover and Winnepisseogee (late Cochecho) Railroad under a business contract at an annual rental of \$29,000, payable semi-annually—the contract, dated November 1, 1863, to run fifty years from that date. The rolling stock of this company consisted of 3 locomotives, 6 passenger and baggage, 45 freight, and 5 hand-cars, and was purchased by the Boston and Maine Company for the sum of \$40,075.

The Portland, Saco and Portsmouth Railroad is leased jointly by the Boston and Maine and the Eastern Companies for ninety-nine years, from January 28, 1843, for an annual sum equal to 6 per cent. on its cost—the two companies sharing equally in the profit and loss of operating.

The rolling stock owned by the company on the 31st of May, 1860 to 1866, has been as follows:

	1860.	1861.	1862.	1863.	1864.	1865.	1866.
Locomotives.....	32	32	36	33	36	37	37
Passenger-cars.....	54	54	53	53	56	63	63
Baggage-cars.....	18	18	19	19	19	19	19
Freight-cars.....	587	587	585	584	629	766	773
Total cars.....	659	659	657	656	704	848	854

This enumeration includes the engines and cars used in the company's business on the Portland, Saco and Portsmouth, and the Dover and Winnepisseogee Railroads.

#### OPERATIONS ON THE ROAD—EARNINGS, ETC.

The following statement shows the miles run by passenger and freight engines with trains, the number of passengers and of tons of freight carried, and the equivalent mileage thereof for the six years closing May 31, 1866:

	1861.	1862.	1863.	1864.	1865.	1866.
Mileage passenger.....	449,152	409,437	434,669	452,688	470,707	499,996
" freight.....	184,019	168,373	176,805	210,144	243,484	239,654
" total.....	633,171	577,810	611,474	662,832	714,191	739,650
Passengers.....	1,868,797	1,630,855	1,845,812	2,047,812	2,658,385	2,809,432
" 1 mile.....	28,308,109	24,042,886	27,878,185	31,519,472	38,920,812	41,021,907
Tons of freight.....	273,440	193,368	229,718	231,809	275,149	310,395
" 1 mile.....	7,551,842	5,552,110	6,433,617	7,091,309	9,046,959	9,689,911

The earnings and expenses of operating the road in the same years are given in the following statement :

	1861.	1862.	1863.	1864.	1865.	1866.
Passengers .....	\$548,731	\$457,483	\$571,654	\$687,347	\$824,701	\$943,222
Freight .....	341,780	249,034	98,151	359,266	394,038	519,006
Rent .....	12,345	13,3 2	20,871	18,967	25,500	18 730
Mails .....	9,735	10 623	10,466	9,984	11,992	11,104
Interest and dividends .....	8 559	2,956	21,338	8,866	14,729	19,097
For land, Saco & Portsmouth R.R. ....	9,000	.....	23,500	32,500	20,000	10,000
Total earnings .....	\$930,151	\$732,428	\$745,980	\$1,116,990	\$1,295,969	\$1,521,159
Operating expenses & other expenses .....	529,728	412,021	516,942	654,500	928,801	1,099,673
Earnings less expenses .....	\$400,423	\$320,407	\$229,038	\$462,490	\$367,168	\$424,486
Dividends paid .....	311,677	249,342	342,532	338,614	347,121	390,186
Balance: credit of income .....	\$88,746	\$71,065	\$86,516	\$123,876	\$20,047	\$34,300
Balance from previous year .....	499,116	587,812	628,927	715,443	838,612	858,659
Undivided earnings .....	\$587,862	\$658,927	\$715,443	\$838,612	\$858, 51	\$882,959

The undivided earnings account is properly a balance of accounts—the stock and liabilities being less than the cost of the road, equipment and other assets by an equal amount. It represents in fact the amount of earnings put into construction, &c., and can only be made available by a distribution of stock to the shareholders, which is their legitimate due.

#### GENERAL ACCOUNT—ABSTRACT OF BALANCE SHEET.

The financial condition, as exhibited on the general ledger at the close of each fiscal year, is shown in the following statement :

	1861.	1862.	1863.	1864.	1865.	1866.
Share capital .....	4,076,974	4,076,974	4,076,974	4,076,974	4,076,974	4,076,974
Sundry balances .....	59,671	49,010	58,472	81,764	91,944	108,177
Deposit & amount payable on ac't of Newburyport R.R. bonds .....	7,640	4,140	4,140	4,140	4,140	3,650
Tax on dividend .....	94,239	22,000	5,079	5,079	9,339	11,277
Dividend payable July 1 .....	145,450	124,671	166,228	164,228	164,228	205,285
General reserve ac't—undivided earn'g's .....	587,862	628,927	715,443	838,612	858,659	882,959
Contingent account, &c. ....	.....	.....	.....	.....	.....	97,969
Total .....	4,964,196	4,905,722	5,026,336	5,168,637	5,205,585	5,386,291

—against which are charged the following, viz. :

	\$	\$	\$	\$	\$	\$
Construction .....	3,881,370	3,880,370	3,880,350	3,883,171	3,883,171	3,966,254
Equipment .....	426,575	412,569	400,463	468,388	506,481	446,557
Property accounts .....	107,915	82,079	79,058	104,321	134,537	140,434
Cash & acc'ts current .....	76,966	59,404	194,581	242,063	208,400	350,571
B. and M. R.R. stock .....	50,000	50,000	50,000	50,000	50,000	50,000
Danvers R.R. bonds .....	71,000	71,000	73,000	73,000	73,000	73,000
Danvers R.R. land damage account .....	758	758	.....	.....	.....	.....
Danvers R.R., as per agreement .....	25,000	25,000	25,000	25,000	27,250	27,250
Newburyport R.R., as per agreement .....	300,000	300,000	300,000	300,000	300,000	300,000
Gt. Falls & Conway R.R. bonds .....	20,000	20,000	20,000	20,000	20,000	20,000
Suspense account .....	4,612	4,543	3,584	2,6 5	2,727	3,226
Total .....	4,964,196	4,905,722	5,026,336	5,168,637	5,205,585	5,386,291

The following, from the annual report for 1865-66, is a cheering comment on the past history of this company: "It is now thirty years since the first portion of this road was put into operation—the branch between Andover and Wilmington. Twenty years have elapsed since the road was fully completed from South Berwick Junction to Haymarket Square, in Boston—a distance of somewhat less than 75 miles. It is more than fifteen years since any new shares have been issued by the corporation. The number of shares actually sold, and on which dividends have been made, since 1850, is 41,557. These were sold for \$4,076,974.52—a dis-

count from their par value of \$78,725.48. This is the actual capital derived from stock. Since that time, the road has been kept in good running order, and has been greatly improved. The engines have been increased very considerably in number and efficiency. We have more cars of every description, and of superior workmanship. Until after 1850 the gross revenue never amounted to the sum of \$600,000 per annum. It has gradually and steadily increased from that time to the present, except in times of great depression in business, as in 1857-58, and 1861-62." And speaking of the results of the last past year, the report says: "Upon a full review of the operations of the corporation for the past year, your directors have no hesitation in expressing their undiminished confidence in the value of your investment. The experience of every year tends to increase this confidence." Perhaps no better criterion of the truth of these remarks can be presented than an exhibit of the dividends that have been paid to the stockholders since the first partial opening of the road. These have been as shown in the following statement:

## DIVIDENDS PAID BY THE COMPANY

1-Oct. 1838. pr ct.....	3	20-Jan. 1848. pr ct.....	5	39-Jan. 1858. pr ct.....	3
2-Apr. 1839.....	3	21-July ".....	4½	40-July ".....	3
3-Dec. ".....	4	22-Jan. 1849.....	4	41-Jan. 1859.....	3½
4-Apr. 1840.....	2	23-Jan. 1850.....	5½	42-July ".....	4
5-July ".....	1½	24-July ".....	3	43-Jan. 1860.....	4
6-Jan. 1841.....	3	25-Jan. 1851.....	2	44-July ".....	4
7-July ".....	2½	26-July ".....	3½	45-Jan. 1861.....	4
8-Jan. 1842.....	3½	27-Jan. 1852.....	3½	46-July ".....	3½
9-July ".....	3	28-July ".....	3½	47-Jan. 1862.....	3
10-Jan. 1843.....	3	29-Jan. 1853.....	3½	48-July ".....	4
11-July ".....	3	30-July ".....	4	49-Jan. 1863.....	4
12-Jan. 1844.....	3	31-Jan. 1854.....	4	50-July ".....	4
13-July ".....	3	32-July ".....	4	51-Jan. 1864.....	4
14-Jan. 1845.....	3½	33-Jan. 1855.....	4	52-July ".....	4
15-July ".....	3½	34-July ".....	3	53-Jan. 1865.....	4
16-Jan. 1846.....	3½	35-Jan. 1856.....	3	54-July ".....	4
17-July ".....	3½	36-July ".....	3	55-Jan. 1866.....	5
18-Jan. 1847.....	3½	37-Jan. 1857.....	3	56-July ".....	5
19-July ".....	4	38-July ".....	3		

From the above it will be seen that only one dividend period has been passed in the twenty-eight years included in the table, that of July, 1849, and even that was compensated for by a double rate in January, 1850.

## RECAPITULATION AND DEDUCTIONS.

In the following two tables will be found a recapitulation of the cost of the road and equipment, and the earnings and expenses for the last six years; and, also, certain proportional deductions therefrom. The primary figures are shown in the statement which follows:

Fiscal year ending	Cost of road and equipments.	Gross earnings.	Expenses and charges.	Nett earnings.	Dividends.
May 31, 1861.....	\$4,307,945	\$930,151	\$529,728	\$400,423	\$311,677
" 1862.....	4,292,939	732,428	442,021	290,407	249,342
" 1863.....	4,280,813	945,980	516,942	429,038	342,522
" 1864.....	4,351,559	1,116,930	654,500	462,430	338,614
" 1865.....	4,339,652	1,295,969	928,801	367,168	347,121
" 1866.....	4,412,811	1,521,159	1,096,673	424,486	390,186

From the above the following deductions are made, based on the length of the company's owned roads aggregating 83 miles.

Fiscal year ending	Cost of road per mile	AMOUNT PER MILE—Earnings, expenses, profits.	Expenses to cost Div. of road. p. c.
May 31, 1861.....	\$51,903	\$11,206 \$6,382 \$4,824	5.00 9.29 8
" 1862.....	51,722	8,824 5,523 3,496	60.8 6.76 6½
" 1863.....	51,576	11,397 6,22 5,169	54.64 10.02 8
" 1864.....	52,42	13,457 7,885 5,572	58.59 10.62 8
" 1865.....	52,387	15,614 11,790 5,424	71.69 10.25 8
" 1866.....	54,166	18,327 13,213 5,114	72.09 9.62 9

These figures cover and overlap one year, the war period.

#### MARKET PRICE OF COMPANY'S STOCK.

The annexed is a statement showing the monthly range of price of the stock of the company at the Boston Stock Board for four years:

	1862-63.	1863-64.	1864-65.	1865-66.
June.....	110½ @ 114	123½ @ 127	134 @ 139½	109 @ 114
July.....	109½ @ 112	124½ @ 126	136½ @ 140	109 @ 112½
August.....	110 @ 114	123½ @ 125	137 @ 139	112 @ 113½
September.....	113 @ 115½	125 @ 128	125 @ 133	114 @ 15½
October.....	116 @ 123½	127½ @ 129	125 @ 127	114 @ 117
November.....	121 @ 123½	126 @ 130	126½ @ 131	115½ @ 119
December.....	121 @ 127½	126 @ 129	125½ @ 132	114 @ 118½
January.....	123 @ 135	124 @ 128	124 @ 126½	114½ @ 117½
February.....	131 @ 133	1 5½ @ 132	118 @ 124½	117 @ 118½
March.....	121 @ 135	131 @ 34	106 @ 120	116 @ 118½
April.....	12½ @ 126	132½ @ 134	109 @ 117	119 @ 123
May.....	125 @ 128½	133½ @ 137	113 @ 116	119 @ 123
Year.....	109½ @ 135	123½ @ 137	106 @ 140	109 @ 123

#### DEBT, FINANCES AND POPULATION OF WISCONSIN.

The exhibit of the financial condition of the State of Wisconsin for the official year ending September 30, 1865, is just published. From this document, and the four preceding annual statements, we have obtained the figures given below.

##### STATE DEBT.

The ordinary State debt is expressly limited by constitutional provision to a sum not to exceed \$100,000, except in case of invasion, or for the suppression of rebellion. Such was the sum total of State issues up to May, 1861, when the Legislature (assembled in extra-session) voted a war loan of \$1,000,000, and at the regular session of 1862 a further loan of \$200,000. In 1863 still another loan or an issue of certificates of indebtedness not exceeding \$350,000 was authorized, and also a loan of \$50,000 for the purpose of defraying extraordinary expenditures in the enlargement of the State capitol. Other laws were passed authorizing temporary loans from the trust funds, for which certificates were issued and deposited with the State Treasurer. The issues for war purposes under these several authorizations were as follows: In 1860-61 bonds to the amount of \$951,500; in 1861-62, bonds to the amount of \$473,100; in 1862-63, bonds \$75,400, and certificates \$220,000—total, \$295,400; in 1863-64, certificates \$385,000, and in 1864-65, certificates \$623,000. These sums amount to an aggregate of \$2,728,000. Of this amount there has been redeemed by returning to the Bank Comptroller the circulation of discredited banks (authorized by chapter 282, laws of 1865) State bonds to the amount of \$548,800, deducting which from the above aggregate, left the whole outstanding indebtedness of the State on the 30th September, 1865, at \$2,179,200, or including interest receipts (\$376,011) issued for discredited currency, at \$2,555,211.

Of this indebtedness there was held at the date named the sums (as follows) by the

School Fund.....	\$1,000,700
University Fund.....	53,000
Normal School Fund.....	278,000
Amount due Trust Funds .....	\$1,331,700



Bank Department for State Banks.....	77,200
" " for banks assigned to the State.....	57,500
Insurance Companies on deposit.....	366,000
Corporations and Individuals.....	341,800
Currency—Interest-bearing Receipts.....	376,011
Aggregate debt.....	\$2,555,101

The details of this indebtedness together with the amounts originally issued are shown in the following statement:

	Issued.	Out- standing.		Issued.	Out- standing.
Bonds due 1867.....	\$250,000	\$229,000	Bonds due 1886.....	\$100,000	\$17,000
" " 1868.....	50,000	50,000	" " 1887.....	100,000	52,000
" " 1877.....	100,000	72,700	" " 1888.....	100,000	68,000
" " 1878.....	100,000	46,500	Certif. " 1893.....	150,000	150,000
" " 1879.....	100,000	15,000	" " 1-94.....	100,000	110,000
" " 1880.....	100,000	65,000	" " 1895.....	100,000	100,000
" " 1881.....	100,000	53,000	" " 1897.....	100,000	100,000
" " 1882.....	100,000	45,000	" " 1898.....	100,000	100,000
" " 1883.....	100,000	54,000	" " 1899.....	50,000	50,000
" " 1884.....	101,000	7,000	Tem Loans 1866.....	528,000	521,890
" " 1885.....	100,000	57,000	Int. Rec' pts 1866.....		376,011

In this exhibit and the previous one the total debt appears to amount to \$110 more than in the first statement; but this is so in the original.

The great bulk of the bonds authorized during the war had to be sold at a time of extraordinary depression in the stock markets. U. S. six per cent. bonds were selling at 84½ per cent.; Illinois six per cents at 77, and Michigan seven per cents at 82. The State Treasurer says that there was no option with the Loan Commissioners as to the time of selling the bonds. The necessities of the Commonwealth were such, that they had to be sold for whatever could be obtained. The law directed the Loan Commissioners to negotiate and contract for a loan or loans, on the most favorable terms which, in their judgment, could be obtained. Finding insurmountable obstacles in the way of raising the money in New York, the bonds were finally sold to the Wisconsin banks at what was called par; 70 per cent. to be paid on delivery of the bonds, and the remaining 30 per cent. in semi-annual instalments of one per cent. Eight hundred thousand dollars were disposed of on these terms. The next sale was made on similar terms, except that eighty per cent. was paid on delivery. Subsequent sales were all made at par, the whole amount paid on the delivery of the bonds. It was never supposed that the entire 30 per cent. left unpaid in the first sale would in all cases be paid. By the terms of the bonds given by the banks to secure the payment of this 30 per cent., the billholders were first to be fully protected. In quite a number of cases, in closing up banks, there has not been enough realized to redeem the circulation and pay the 30 per cent. bonds in full; yet, notwithstanding these losses, the State has realized, in the aggregate, on all the bonds sold during the progress of the war 88 per cent. There is due from banks still in good credit, on the thirty per cent. bonds, \$41,620. The banks which have assigned their bonds to the State, as provided by chap. 232, laws of 1865, have also assigned the benefits of their lost circulation, and the Treasurer thinks that enough will be realized from these two sources to make the aggregate receipts for the bonds sold ninety-two per cent.

#### VALUATION AND TAXATION.

The subjoined statement exhibits the quantity of taxable land and the value thereof, together with the valuation of city and village lots and

personal property, with the amount of taxes levied thereon for State purposes for the years 1860-65, both inclusive:

	Acres of Land.	Valuation.				Taxes levied.
		Land.	City, &c. lots	Personal.	Aggregate.	
1860.....	17,616,174	\$115,377,397	\$41,178,377	\$27,506,761	\$184,062,536	\$242,031
1861.....	17,792,854	118,022,305	36,721,727	25,313,504	180,062,536	340,492
1862.....	17,298,631	120,572,222	37,596,038	24,331,861	182,500,322	599,251
1863.....	16,845,374	96,156,354	31,433,779	23,481,640	153,071,773	382,130
1864.....	16,845,496	93,039,611	32,916,999	26,982,719	152,939,329	786,861
1865.....	17,563,316	91,453,693	33,151,291	32,811,313	157,416,297	900,278

The taxes above stated are those for the service of the next succeeding year. Regarding the diminished valuation after 1862, it is proper to observe that the diminution was, in a great measure, the result of a change in the assessment law.

#### RECEIPTS AND DISBURSEMENTS.

The following statement exhibits the receipts into the treasury on account of all the funds and the disbursements on all accounts yearly, for the years ending Sept. 30, 1861-1865, both inclusive:

	1861.	1862.	1863.	1864.	1865.
Balance from previous year.....	\$187,301	\$243,931	\$312,217	\$267,926	\$107,621
Receipts.....	1,674,234	1,732,474	2,636,889	2,182,722	4,188,746
Total resources.....	\$1,861,535	\$1,976,405	\$2,949,106	\$2,550,648	\$4,296,367
Disbursements.....	1,617,604	1,664,188	2,581,180	2,443,027	4,061,877
Balance to next year.....	\$243,931	\$312,217	\$367,926	\$107,621	\$234,490

The above statement includes the several trust funds which are no charge upon the State. It also includes the Allotment Fund (so called), which is simply an agency through which the soldier in the field was enabled to send to his family at home a portion of his pay. Transfers from one fund to another have also been large, and of course to that extent have duplicated both sides of the account. Again, loans have been made, and in some part repaid. Allowing for all these, it is obvious that the actual receipts and payments have been much less than exhibited above, and to obtain them approximately, at least 25 per cent ought to be deducted from the statement yearly.

#### POPULATION.

Wisconsin enumerates her people every ten years, at a period intermediate with the successive Federal enumerations. The last taken, under State auspices, and recently published, was that of 1865, being the third in succession of the decennial series. We find among a number of other State documents transmitted to us by his Excellency Lucius Fairchild, Governor of the State, a copy of this last census report.

When the late war broke out, and the calls for men to fill the ranks of the National army were responded to from every farm and workshop, the cry of "depopulation" was heard from all quarters. The progress of hostilities but increased the draft, and the prevailing idea became intensified. And yet, when the result is obtained it is found that instead of there being any deficit in the last five years' account, some of the States, Wisconsin for instance, show a generous increase. How shall we account for this result? It is certain that at least a moiety of our young men went to the "front" during the four years covering the period of the war. But it must also be remembered that the number of absentees from their homes at any one time was never more than a third of the aggregate number that entered the armies. In fact, we may say that communities everywhere were divided into watches that relieved each other at stated or irregular periods, and hence, with the exception of those who fell in battle or by sickness, the mass was not seriously or permanently diminished. For the absolute losses

the compensation was an increased immigration from foreign countries, tempted hither by the freedom from conscription which the new comers were promised and the large wages accorded to labor of all kinds. Other compensating agencies were found in the early marriages which obtain in this new country and the abundance of food, which favors not only these personal associations, but also fosters a rapidity of procreation unknown in thickly-populated countries where the staff of life, in sufficient quantity, is beyond the reach of the working classes. France, for instance, does not increase in as large a ratio in fifty years as does Wisconsin in five years. Marriage in that country is delayed far into maturity, simply on account of wages and that which wages should purchase being inadequate to the wants of the family. No fear of such an unnatural exigency is entertained by the young people of the West, and hence the longer procreative term, by compounding numbers, rapidly fills up the country.

Such have been the active agencies which have sustained Wisconsin (and probably many of her sister States) through the war. In 1860, when the last federal census was had, the population of the State of Wisconsin was 775,881. According to the State census of 1865 it was found to be 868,937. Here we have an increase, notwithstanding war drafts and their naturally expected results, of 93,056, which is equal to an addition of twelve to every hundred of the population of 1860. Some few counties appear to have lost, but generally the increase has been remarkably uniform, though much greater in the urban than in the agricultural districts. The following table will illustrate the latter proposition:

	1860.	1865.	Increase.
Pop. of 9 cities of 5,000 and upwards.....	92,096	121,512	31.9 p. c.
" 16 cities and villages (2,500 to 5,000).....	40,758	59,440	45.9 "
" 9 cities and villages (1,250 to 2,500).....	11,291	17,319	53.8 "
Total, 34 cities and villages.....	144,141	198,271	37.4 p. c.
Agricultural districts.....	631,736	670,666	6.3 "

The tendency of the population to concentrate in cities and villages is here remarkable. Thus while the agricultural population has increased only 6.3 per cent. in the five years (1860-65,) the urban and village population has increased 37.4 per cent. The greater activity of business on account of the war will explain this centralization. Centralized labor was required while the war lasted in carrying on the peculiar commerce created by it. It will be seen however, on reference to the tables of county and city population, (given below,) that the "railroad towns" have most largely partaken of the increase, and this will be permanent, while the increase of the agricultural towns will be re-distributed to its normal localities in the open country.

Below we give the tables showing in detail the results of the census compared with the Federal census. The first gives the population of Wisconsin by counties, and the latter the population of the cities and villages as they were in 1860, and in 1865:

## POPULATION OF WISCONSIN, 1860 AND 1865.

Counties.	1860.	1865.	Counties.	1860.	1865.
Adams.....	6,492	5,698	Manitowoc.....	22,416	26,762
Ashland.....	515	256	Marathon.....	2,292	3,678
Brown.....	11,795	15,282	Marquette.....	8,233	7,327
Buffalo.....	3,864	6,776	Milwaukee.....	62,518	72,320
Burnett.....	12	171	Monroe.....	8,410	11,652
Calumet.....	7,895	8,638	Oconto.....	3,592	4,858
Chippewa.....	1,895	3,278	Outagamie.....	9,587	11,842
Clark.....	789	1,011	Ozaukee.....	15,682	14,882
Columbia.....	24,441	26,112	Pepin.....	2,392	3,002
Crawford.....	8,063	11,011	Pierce.....	4,672	6,324
Dallas.....	13 (no returns)		Polk.....	1,400	1,677
Dane.....	43,922	50,192	Portage.....	7,507	8,145
Dodge.....	42,818	46,841	Racine.....	21,360	22,876
Door.....	2,948	3,063	Richland.....	9,730	12,186
Douglas.....	812	532	Rock.....	36,690	36,032
Dunn.....	2,704	5,170	St. Croix.....	5,892	7,255
Eau Claire.....	3,162	5,231	Sauk.....	18,963	20,154

Fond du Lac.....	34,154	42,029	Shawano.....	829	1,369
Grant.....	31,189	33,618	Sheboygan.....	26,875	27,671
Green.....	19,808	20,646	Templeton.....	2,560	5,199
Green Lake.....	12,663	12,596	Vernon (Bad Ax).....	11,007	13,644
Iowa.....	18,967	20,657	Wa. worth.....	26,496	26,773
Jackson.....	4,170	5,631	Washington.....	23,622	24,019
Jefferson.....	30,433	30,597	Waukesha.....	26,831	27,029
Juneau.....	8,770	10,013	Waupaca.....	8,851	11,208
Kenosha.....	13,900	12,676	Wausara.....	8,770	9,002
Kewaunee.....	5,530	7,039	Winnebago.....	23,770	22,767
La Crosse.....	12,186	14,894	Wood.....	2,425	2,965
Lafayette.....	18,134	20,358			
La Pointe.....	353	269	Total.....	775,881	868,937

## POPULATION OF CITIES AND VILLAGES.

Cities, &c.	Counties.	1860.	1865.
Milwaukee*.....	Milwaukee.....	45,246	55,641
Fond du Lac* †.....	Fond du Lac.....	5,431	12,491
Oshkosh*.....	Winnebago.....	6,064	10,069
Madison.....	Dane.....	6,579	9,995
Janeville*.....	Rock.....	7,641	8,427
Racine* †.....	Racine.....	7,751	8,041
Watertown*.....	Dodge and Jefferson.....	5,302	6,683
Sheboygan* †.....	Sheboygan.....	4,258	5,129
La Crosse*.....	La Crosse.....	3,924	5,037
Beloit*.....	Rock.....	4,773	4,880
Waukesha*.....	Waukesha.....	2,769	4,817
Beaver Dam*.....	Dodge.....	2,765	4,319
Manitowoc †.....	Manitowoc.....	3,055	4,197
Kenosha* †.....	Kenosha.....	3,968	4,056
Mineral Point*.....	Iowa.....	2,386	3,808
Jefferson*.....	Jefferson.....	2,006	3,896
Prairie du Chien* †.....	Crawford.....	2,370	3,556
Berlin*.....	Green Lake.....	1,449	3,530
Ripon*.....	Fond du Lac.....	2,010	3,490
Portage*.....	Columbia.....	2,870	3,379
Monroe*.....	Green.....	2,171	3,197
Green Bay* †.....	Brown.....	2,261	3,361
Waupun*.....	Dodge and Fond du Lac.....	2,110	3,250
Platteville.....	Grant.....	2,858	3,039
Appleton* †.....	Outagamie.....	2,327	2,665
Two Rivers.....	Manitowoc.....	1,337	2,469
Oconto.....	Oconto.....	886	2,215
Lancaster.....	Grant.....	1,960	2,111
Sparta*.....	Monroe.....	1,284	1,897
Steven's Point.....	Portage.....	1,533	1,719
Waterloo*.....	Jefferson.....	1,565	1,719
Hudson.....	St. Croix.....	1,518	1,468
Wausau.....	Marathon.....	543	1,236
Boscobel*.....	Grant.....	665	1,209
Horicon*.....	Dodge.....	.....	1,196
Mauston*.....	Juneau.....	767	767
Juneau*.....	Dodge.....	.....	532
Total.....		144,145	198,271

The progress of Wisconsin in population since 1860, large as it has been under the retarding influences of a war period, has probably not exceeded that of the whole country. Notwithstanding the Depew census taken in 1865, no one believes that the great State of New York has been either retrograding or standing still. In Iowa, the report of the new census, a copy of which has just reached us, shows the population in 1865 to have been 754,732, whereas in 1860 it was only 674,913, being an increase in five years of 79,819, or 11.8 per centum, about the same as in Wisconsin. Taking this ratio of increase as that of the whole country, we will find that our aggregate population, which numbered in 1860 31,443,321, had increased in the five years ending June 1, 1865, to 35,216,519, or, in round numbers, the population of the United States was, at the date specified, 35,000,000. This increase, though somewhat inferior to that shown in the decennial periods previous to the war, is, nevertheless, highly encouraging. It indicates an existing strength in the country, a recuperative power which gives great promise for the future.

\* Railroad cities and villages.

† Lake cities, &amp;c.

‡ Mississippi cities, &amp;c.



## EXTENSION OF TEA CULTIVATION.

The Darwinian theory, in the attempt to explain some of Nature's mysterious laws, refers their solution to the natural selection of species, and represents the various families of animal creation as engaged in one life long—we might almost say perpetual—struggle for existence. The legend of Ormuzd and Ahriman, in Persian mythology, and of Vishnu the creator, and Seeva, the destroyer, in the mythology of the Hindoos, is typical, no doubt, of the two great agencies of Nature—the production of life and its destruction. But it is not only here that we find proofs of this innate antagonism; we see evidence of its existence in the vegetable kingdom. With less of poetical sentiment, but more practical directness, we recognise this struggle as one between production and consumption. To determine in what way, and to what extent, these two important elements act and re-act upon each other is a question affecting perhaps more than any other the welfare of the human race; and a consideration of some of the points bearing upon the question, though in the present instance having a more immediate reference to tea, may be regarded as not out of place in a journal professing to deal exclusively with articles of produce. At first sight it would appear as if no reliable relation between consumption and production could be established, from which conclusions might be deduced; for whilst the power of consumption might be presumed to be almost limitless, bounded in fact only by the extent to which population itself may be increased, it is as confidently believed that production could only be carried on under narrower limits, restricted by considerations of temperature, soil, and human labor. It is, however, easy to check consumption by prices, and statesmen, when they thought that if an impost upon any article of prime necessity were doubled, the revenue accruing from this impost must also be doubled, were arguing upon a fallacy. The possibility of a decrease in the consuming power was tacitly disregarded by them, and it is only within a comparatively recent period that the magnitude of the error underlying the assumption has been comprehended to its full extent, and the superior productiveness of low duties admitted as a fact without reserve or qualification. And, perhaps, at the present day, these antiquated and fallacious maxims might hold good, had it not been for the aid brought to bear upon the subject by statistical science, a science without which no study can be deemed profitable, no theory complete. Whilst opinions so erroneous prevailed on the subject of consumption, it was not likely that the views generally held on production should be more enlightened, and we find, accordingly, the most timid, and perhaps to some minds even alarmist, views on the subject of nature's productive powers. Of such a character was the opinion recently promulgated, as to the probable scarcity of coal within our island; and such, too, are the views put forward from time to time with regard to our future supply of tea—in all sincerity doubtless, but with a somewhat partial and exaggerated estimate of things as seen from one point of view exclusively. That increasing consumption brings with it an increasing production is surely as much a familiar fact as that an extended cultivation, by introducing competition, and so lowering prices, will encourage increased consumption. But to assert that consumption is overtaking production, or, what is the same thing, that production will fall short of the demand made upon it, is very much like

saying that the hinder wheels of a carriage must before long overtake the front wheels. The fact is, that these two agencies—consumption and production—are so inextricably interwoven in their action upon each other that it is impossible to estimate with exactness the precise value of the one without considering it in its relation to the other. As contrasted with animals of a lower organism, man is distinguished by his ability to live and thrive under the most opposite conditions of climate and temperature, from the poles to the equator; and this universality of existence is shared to almost the same extent by those plants and herbs which are more immediately necessary to his subsistence, such as corn, the potato, etc. Before long we may even be in a position to include tea in this list, as its cultivation is now being attempted in all quarters of the globe, in Asia, Australia, Africa, and America and it has also been attempted in Southern Europe, with results which gave strong hope of its profitable introduction into Spain and Italy. We propose to show that China is not the only place from which we can obtain our tea supplies. We do not mean to say that tea could be immediately produced in marketable quantities wherever the climate is suitable; but that, in the course of time, if prices were sufficiently tempting, we might become independent of China and Japan. Putting aside India, which could supply not only England, but the whole world with tea, we turn to other parts of the world where, as yet, tea cultivation is only an experiment:—"The important experiment of testing the climate and soil of South Australia, as regards their suitability for the China tea plant," says the *Melbourne Register*, "is about to be made on a somewhat extensive scale. The Government have agreed to pay Mr. Sterndale, who recently brought a quantity of tea seed to the colony, the sum of \$50 for one hundred weight of the seed, and they have instructed Dr. Schomburgh, superintendent of the Botanic Garden, to sow and distribute it, with the view of fairly testing its adaptability to this country. Accordingly, it has been determined by the governors of the Botanic Garden that one-half of the quantity shall be sown in the grounds of that establishment, and that the other half shall be distributed in various parts of the colony."

In South Africa, the experiment of tea cultivation seems to have been attended with the most complete success: "In another column," says the *Natal Mercury* of July 3rd, 1866, "will be found an advertisement offering for sale the first tea trees imported into the colony. That soil or climate is no bar to the successful production of tea in Natal these trees will abundantly prove. They were imported about ten years ago, and were then small plants, bearing from ten to fifteen leaves each, and since then have grown like native bushes, until they are now thick shrubs from six to eight feet high, and as much through. A small sample of tea made from these plants, with unsuitable appliances, was sent with the Natal collection to the London Exhibition in 1862, and obtained an award of commendation from the jurors. We should be glad to see this enterprise taken up with energy, now that an opening presents itself, and the article of tea added to the staple products of the colony."

And fifteen years ago an American author, Francis Bonyngue, descending on the future wealth of the United States, and the possibility of a decline in the cotton trade, proposed the substitution of tea, coffee, or indigo, in the place of the cotton plant. After an elaborate comparison between

China and America, considered with respect to climate, soil, and the price of labor, Mr. Bonynge comes to the conclusion in which we fully concur, that in the event of any considerable reduction taking place in the price of tea, Europe, or we might say, England, could consume five or six hundred millions pounds of tea as readily as the one hundred millions, the quantity which represents our annual consumption. Mr. Bonynge goes on to prove that its production in America could be profitably carried on at as low a sum as  $2\frac{1}{2}$  to  $3\frac{1}{2}$  cents per lb.—an opinion which we are not prepared to endorse so unhesitatingly. It is but fair to Mr. Bonynge to admit that his remarks upon the suitability of America for the cultivation of the tea plant are curiously corroborated by one of the most eminent of modern botanists Professor de Candolle, from whose address, delivered this year at the Horticultural Exhibition at Kensington, we quote the following remarks:

"Botanical geography shows in the clearest manner the analogy between the vegetation and climate of certain regions; and, just as a celebrated geologist was able to say, beforehand, there was gold in such a part of New Holland, and gold was found there, so could the botanist say with equal certainty that the olive tree and the cork oak would succeed in Australia; that the eastern and temperate region of the United States was favorable to the growth of Chinese plants, more particularly to that of tea; and that that part of America included between San Francisco and the Oregon territory would, one day, supply wines as varied and as excellent as those European ones produced between Portugal and the Rhine. It is a singular fact that the two principal beverages of the civilized world, wine and tea, which produce similar stimulating effects, and which to a certain extent are the substitutes one for the other in different countries, present also in the mode of cultivating them the most marked resemblances and differences. The vine and the tea plant succeed best on stony, barren hill-sides. The two shrubs require a temperate climate, but the vine needs heat, and no rain during summer, whilst the tea-plant requires rain, and but little summer heat; the result of which is that these two species are almost geographically incompatible. Vine-growing countries will never produce tea, and *vice versa*." The experiment which Mr. Bonynge so warmly recommended had previously been tried with the most encouraging prospects of success by Dr. Junius Smith, in the year 1849, in South Carolina. Upwards of 500 plants of from five to seven years' growth were imported from China and India; and it is interesting to know that the general characteristics of the plant remain unchanged by the new climate and soil, and that the "leaf puts out at the same period of the year that it does in China." (Simmonds' *Commercial Products*, p. 96). Dr. Smith estimated that he could produce tea in America at as low a price as 5d per lb. whilst the average cost in China at the ship's side is at least 10d per lb. This excessive cost, that is, apparently excessive, when contrasted with Dr. Smith's moderate estimate, arises almost wholly from the expensive nature of the means of transport, and the want of proper machinery. "In America," says Simmonds, the authority just quoted, "the beating and rolling of the leaves, one-half of the labor, could be done by the simplest machinery, whilst the fuel could be economised by means of flues." It has been suggested too, with great plausibility, that it might be cultivated with success

in California, where there are already so many Chinese on the spot, whose labor and experience would be thus utilized, when the gold hunting mania had subsided. "The climate, soil, and surface of California," says Simmonds, "exactly answer the requirements for the growth of this plant. The time may yet come when the vast ranges of hills that traverse this State shall present terraces of tea gardens, cultivated by the laborious Chinese, and adding millions to the value of its products." We may add, that we heard some time since that tea was successfully grown in Florida. It also appears that the cultivation has been carried on in Brazil since the beginning of the century, and that the industry still exists, though on a small scale. The Dutch seem to have been the first to break in upon the Chinese monopoly of tea cultivation, by introducing the plant into Java in the year 1828; and in the year 1848 as much as 1,000,000 lbs. was shipped from that island. The tea plant grows also in Cochin China, Tonquin, and some of the mountainous parts of Burmah, but the quality is generally considered inferior.

The Indian crop may now be roughly reckoned at 4,000,000 lbs., but official papers show that the tea land on the slopes of the Himalayas alone is capable of producing 600,000,000 lbs. of tea annually. By way of an appropriate pendant to these remarks we turn to Mr. Henry Waterfield's able report on the moral and material progress of India during the year 1864-65, and find the following remarks on the subject of tea cultivation in India: "Considerable difficulty was experienced in obtaining information as to the progress of tea cultivation in Assam, owing to the reticence of the planters. According to the most accurate returns which could be procured, the extent of land under cultivation increased by 12,838 acres, and the out-turn of tea by 188,217 lbs. The number of proprietors was three hundred and sixty-six, of whom one hundred and forty nine were natives, but several of the latter were merely owners of grants, with nominal clearances on them. The estimated produce in 1865, if realized, will give, at the price obtained in England, receipts to the value of £300,000. The area taken up for tea planting in Assam is 516,475 acres, of which about a twelfth has been brought under cultivation. There seems ground for apprehension that, unless great activity is shown in importing laborers, some of the lands already cleared will run again into jungle, as the available number of workmen in the province does not give one person for each acre that is cultivated. There is, however, no indication of a decrease in the popularity of tea planting; and though not perhaps as profitable as it was to the first owners who prepared the estates, and sold them at an enormous advance on their outlay, it promises to afford a safe and reasonable profit to all those who have not paid an excessive price for their gardens.

"In Sylhet there was a very slight increase in the area cultivated, but the out turn of tea exceeded that of the previous year by nearly 25,000 lbs. The soil of Chota Nagpore is considered to be as well suited for tea as that of Assam, but the climate is rather against a favorable development of the plant, though the results already obtained are sufficient to warrant a fair hope of success. The cultivation of coffee was also commenced in that division. The quality of the tea raised by the Rhamghur Company in the Hazareebagh district is pronounced to be excellent. The number of laborers embarked for the tea plantations in Assam, Cachar, and Sylhet



was 28,282. The act which was passed by the Bengal Council to regulate their contracts has been mentioned in another part of this report. Great care and consideration are now shown to the coolies by contractors, and from the few complaints which have been received, it is believed that they are well treated by the recruiters also.

"The yield of tea at the government plantations in the North Western provinces was 54,527 lbs., much of which went to the Umritsur market, or was exported to Afghanistan and Cashmere. The cultivation of tea has been commenced in Oude by some European gentlemen, who have purchased waste lands, and laid out large sums of money in their reclamation. There is hardly any available waste land suitable for tea in the Muree hills, and the only way by which its cultivation in that part of the Punjab can be secured is by inducing the peasantry to undertake it, for which purpose many thousands of plants were distributed from the government plantations to the adjacent villages. The cultivation in the Kangra valley being now placed on a sound basis, the government has determined to withdraw from the undertaking, and the plantations at Holta will be sold by auction. Upwards of seventy tons of tea seeds, and 1,769,033 seedlings were distributed gratis to planters during the year. In the Madras hills seven acres of ground have been planted with the Chinese and Assam varieties of tea, with the view of supplying seed to planters." In this last statement Mr. Waterfield seems hardly to have realised the extent to which tea cultivation is being tried in Southern India. The omission from the report of Ceylon where tea is also being tried, with fair hope of success, is probably due to the fact that Ceylon is technically a crown colony, and is thus excluded from an Indian report, as India is under a different branch of the government. When these various facts are taken into consideration it will be seen that there is little chance of production being overtaken by consumption, and that the question of the introduction of tea cultivation over the greater part of the semi-temperate portion of the globe is simply one of price and of time.

It would appear, in short, as if the tea-plant, like the potato, on account of its being necessary to man as an article of food, were capable of being cultivated almost anywhere. Little fear then need be felt on the score of its possible scarcity in one particular country. Indeed, at present, the quantity that we derive from sources other than China itself amounts to no less than 14,000,000 lbs., about 12½ per cent., or one-eighth of the total exports from China. When it is remembered that the sources out of China, from which these supplies are drawn are entirely new, it will, we think, be conceded that our arguments on the subject of tea extension are not chimerical, but founded on fact.

#### CHEAP BEEF—THREE PROCESSES FOR PRESERVING MEAT.

An official report on the different methods of curing has been laid before Parliament, from which we clip the following:

"Mr. John Morgan, Professor of Anatomy in the Royal College of Surgeons in Dublin, Baron Von Liebig, of Munich, and Mr. Sloper, of London, have, by simple and efficacious adaptations of the principles of science to material purposes, made discoveries which open new fields of industry, and which, if carried out with proper energy and spirit, will work incalculable benefits on mankind,

and, at the same time, develop the vast resources of these South American republics,

#### MORGAN'S PROCESS.

"The preservation of meat by Mr. Morgan's process can hardly be said to have gone beyond the stage of experiments, which have, however, been attended by the most signal success, and it is a source of regret that the working of the system should not have been more actively followed up, as all samples of the meat already forwarded to Liverpool have been eagerly purchased. Since the month of May of last year, when operations were commenced, five hundred thousand pounds of beef and mutton have been shipped to Liverpool, and met with a ready sale at four-pence per pound. The price, it is calculated, will be barely remunerative, owing to the heavy expenses attendant on the establishment of a new business, but it is believed that it will leave a fair profit when once the working is established.

"Mr. Morgan's process is based on forced infiltration, and he has adopted the circulatory system of the body as a means of introducing the brine into the tissues. The method is simple, demands but little labor, and no expensive machinery. The animal, if a sheep, is killed by a blow on the head, if an ox, by the insertion of the point of a knife at the back of the head, which severs the spinal cord and causes instantaneous death. The chest is then sawn open and kept so by a cross piece of wood, and the heart is exposed. An incision is made in the right ventricle and another in the left, the blood being allowed to escape: when it has ceased flowing, a pipe with a stopcock is introduced into the incision on the left ventricle of the heart, and so into the aorta or great vessel leading through the body, and is there firmly retained. This pipe is connected by a putta percha flexible tube to a barrel containing the fluid to be injected, which is composed of water and salt (one gallon of brine to the cwt.) and a quarter to half a pound of nitre, carefully refined, and fixed at an attitude of from eighteen to twenty feet.

"The briny fluid being let on rushes out at the right side of the heart, after traversing all the circulatory organs, clearing the vessels and capillaries, and preparing the body for the second stage, which is performed by closing the incision in the right side of the heart with a sliding forceps, and thereby rendering the circulatory system perfect with the vessels free and ready to receive the preservative fluid. A few seconds suffice for the brine to infuse the whole body, when, by cutting the ear or hoof of the animal, a stream of clear pure brine, untainted by a single particle of blood, will instantly be seen to flow. An ox can be preserved in ten minutes, the pressure of the injection being from ten to twelve pounds to the square inch, and from twelve to fourteen gallons of the fluid are injected: of course, considerable less in a sheep."

#### LIEBIG'S PROCESS.

"Near the small town of Fray-Bentos, La Plata, is the establishment for the working of Baron Liebig's '*Extractum Carnis*.' This process differs essentially from that employed by Mr. Morgan, for the meat, instead of being preserved whole, is reduced to an essence, and can consequently only be used as soup or stock. Its strength can be estimated from the fact that thirty-three pounds of meat are reduced to one pound of essence, which is sufficient to make broth for

one hundred and twenty-eight men. A tin containing one pound of this extract can be sold in London for 12s. 6d. Eight small tins will hold the concentrated alimentary matter of an entire ox, at a price of 96s., and will make over one thousand basins of soup—good, strong soup; one tea spoonful to a large cup of water, and either eaten alone or with the addition of a little bread, potato and salt, affords a good repast. The small bulk taken up by this excellent preparation recommends it especially to the army and navy; and its purity and entire absence from grease particularly adapt it to the use of hospitals and invalids. Hitherto, the almost exclusive exportation of this excellent extract has been to Germany, where its consumption is already very great; but a new company ('Liebig's Extract of Meat Company [Limited], 43 Mark Lane) is about to be formed in London, when it is to be hoped that this new article of food will be generally appreciated and adopted.

"The establishment at Fray Bentos will soon be worked on a very extensive scale, and branches formed at Buenos Ayres and Rio Grande, when an average of three hundred and fifty head of cattle to the three places will be slaughtered daily. The process by which the essence of the meat is extracted is simple, though requiring no small amount of labor and machinery. The meat of the animal, after being killed, is allowed to cool for twenty-four hours; it is then placed in round iron rollers (armed inside with points,) which, being revolved by steam, reduce the meat to a pulp. This pulp is thrown into a large vat with water and allowed to steam for an hour, and is then passed into a reservoir (shaped like a trough with a sieve at the bottom,) whence the liquid of the meat oozes into another vat from which the fat is drawn off. The pure gravy is then put into open vats supplied with steam pipes, and with bellows on the surface, which produce a blast and carry off the steam, thus helping the evaporation and preventing condensation. Here it remains from six to eight hours, when it is passed into a filtering vat and drawn off in the form of extract of meat; when cool it partially hardens, and is ready for packing in tins and exportation."

#### SLOPER'S PROCESS.

"The remaining process to be described is one of great interest, and has been lately patented by Messrs. McCall & Sloper. The patent has been conceded for the whole of South America to Messrs. B. Paris and B. S. Sloper, who are at present at Buenos Ayres actively employed in making experiments, when, should they prove successful, a company will be formed in England for the working of this industry. These gentlemen profess to be able to preserve meat in its fresh and raw state, which is to arrive in England, or elsewhere, in the exact condition as butcher's meat just killed, and be able to dispose of it at the rate of 4d. to 5d. per pound; and that moreover when taken out of the air-tight tins in which it is to be packed, and on being exposed in the air, it will keep twice as long as ordinary butchers' meat. The curing process is simple, and is based on the destruction of oxygen from the vessel in which the meat is packed. All bone is extracted from the meat, but the fat is left. From the tins in which it is placed the air is exhausted by means of water forced in at the bottom, which, when it reaches the top, is allowed to redescend and run off, and the vacuum thus left is filled from above by a certain gas, the composition of which is kept a profound

secret. The two holes at top and bottom are carefully soldered down, and the meat is then ready for exportation. The only risk it runs is from leakage, the smallest opening in the tin case proving destructive by allowing the gas to escape and the air to get in."

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#### PETROLEUM IN NEW SOUTH WALES.

We have been favored by Mr. John Mackenzie, formerly of Wigan, whose name is already well known to the readers of the Journal, with a highly interesting account of what is now doing with the Hartley Boghead Cannel Coal. Mr. Mackenzie resigned his appointment of Government Examiner of Southern Coal Fields, so as to be enabled to take up land containing the Hartley Boghead Cannel Coal, and work it (the Government not permitting their officers to embark in private enterprise, and of late also denying them the privilege of reporting on mineral property for private individuals), a satisfactory evidence of the value he attaches to the deposits in a commercial sense. Mr. Mackenzie writes that he learns from the Mining Journal that there is a great excitement about shale in England, and that we have numerous companies commencing to extract oil, now that the supply from the American oil wells is decreasing, and that the Americans have put 10d. a gallon duty on their refined oil. The Hartley Cannel is so rich, and the oil of such excellent quality, that they expect to be able to compete successfully with the refined oil in the English and other foreign markets. The cost of extracting oil, refining it, and delivering it in Sydney, is about 1s. 8d. to 2s. a gallon; but he estimates it at 1s. 8d.

There are four different companies making oil. Messrs. Samuels & Want (Hartley Kerosene Company), from Cannel, yielding 140 to 150 gallons to the ton. The Australasian Mineral Oil Company, who have erected works in Sydney Harbor for extracting and refining oil, &c., and up to within a few weeks have been getting their Cannel coal from Mr. Russell's Stony Creek, near Maitland, but they find that the Stony Creek Cannel yields such a small quantity of oil per ton that they are letting the mine, and will have to get Cannel from or near Hartley. The third shale works are those of Mr. Graham, at Wollongong, the shale yielding about 40 to 50 gallons of crude oil to the ton. The fourth is a very small place at Penrith, 34 miles on the Bathurst side of Sydney, where Mr. Wilson gets Hartley Cannel, and extracts and refines the oil from it. Hartley is destined, in his opinion, to be the greatest shale and Cannel coal producing district in New South Wales, or he would not have relinquished his Government appointment to take up land there. His reasons for saying so are, that having been over the greater portion of the New South Wales coal basin, he is of opinion that the Cannel, as rich as it is at Hartley, is not very likely to be found in places so conveniently and economically situated for railway transit to the sea coast; and there are not many places where the seam crops out to the day where it could be worked to a profit.

Mr. Mackenzie has inclosed a tracing (which can be seen at our office), showing the land taken up at Hartley by different persons, and the places where the Cannel is proved, and where the seam has changed into stone, ironstone, fire-clay, &c. The Great Western Railway will be opened to Hartley in about 12



months from now. The price for taking the refined oil from Hartley to Sydney, a distance of about 74 miles, will, it is anticipated, be 2d. or 3d. per gallon. The seam of Cannel varies very much in its character, like the Boghead Cannel of Scotland, which, from what he had read, appears to be in a patch of 1½ to 2 miles in diameter, and finding other patches in Australia, leads him to think that there may also be other patches in Scotland.

The largest patch at present proved at Hartley appears to be in the Grose, and this Mr. Mackenzie has acquired. The Sugar Loaf Patch is about 21 miles diameter. Mr. Mackenzie's party are now working the Cannel on their 170 acres (or Sugar Loaf Patch), and they had just proved a second seam of Cannel on the same patch, although the seam had only been sought the same morning. It is very curious to see the way other seams of coal gradually change to good Cannel—*London Iron Trade Circular.*

#### A WONDERFUL CEMENT FOR IRON.

A private view of an exhibition of a most interesting character took place about the middle of August, at the Albion Works, Battersea, England. The exhibition consisted of a number of practical illustrations of the uses to which a certain description of cement is applied, having for its principal ingredient more or less of a particular gum or substance, called the Zepipe, which for some years past has been identified with the name of Colonel Szerlemey. It appears to be a most protean substance, for it holds on with wonderful tenacity to timber, glass, brick, cement; and last, though by no means the least of its remarkable qualities, it will unite iron surfaces together as completely as though they were welded. The cement has the quality of being perfectly water and air tight. It can be conveniently used, and hardens with great rapidity. About five minutes is the maximum of time required for it to harden thoroughly. Of the value of such a material as this for engineering and building purposes it is impossible to speak too highly. Our professional readers will at once perceive a variety of uses connected with railway and hydraulic works to which a material of this kind would be of the greatest possible value. Tunnels and bridges, docks and quay walls, could be constructed by its use in considerably less time and at greatly reduced cost; and with respect to sewers, an immense improvement would be effected in employing a material on which fluids produce no impression. Platforms and railway stations could be provided of equal strength to the present and with less consumption of materials. The invention is one of that character with respect to which there can be no mistake, and any person who sees may judge for himself of the properties of the cement, and we shall be greatly mistaken if some of our large contractors do not very shortly seek to test the practical value of this remarkable "iron cement."

On previous occasions, we have described the remarkable preservative qualities of the Zepipe composition on stone and brick, and the extraordinary effects which the application of one part of the process has upon paper, converting it into a substance harder and more enduring than oak, and capable of being substituted for metals in many of the uses to which they are applied in the arts and manufactures. Following out the line of investigation into the chemical con-

stituents of the substances which he employs, the gallant colonel has now succeeded in producing some results, which, if they had not been shown under our inspection, we should have hesitated to believe possible. By combining various substances which may be readily obtained in large quantities, and at almost nominal prices, the ingenious inventor has made what he calls this: "iron cement," and, truly, it is an iron cement. It is a cement which, easily applied, becomes in a few minutes hard as iron, and, so far as we are aware, this is a quality which is not possessed by any other substance—that of complete and perfect cohesion to iron. At the factory at Battersea, we saw two large plates of iron held together so firmly as to defy all attempts at separating them. The plates had, in several parts, been fractured by the attempt to separate the two surfaces, but they still remain firm and immovable. Two plates of iron were cemented together in such a manner as that the lower one could have suspended to it the weight of several tons; the projecting corners of the lower plates to which the weights were attached were bent and curved, and the upper and lower plates had "buckled," but they still remained held together by the thin layer of iron cement as though they were but one plate. By the side of this, a plate has been made up of alternate thin sheets of iron and planks of timber, and the wood and the iron adhered as firmly as in the case when iron surfaces only were exposed to the action of the cement. A third test consisted of thin sheets of iron with alternate layers of paper, which had been previously coated with another kind of composition of M. D'Szerlemey's. There, the same wonderful cohesion existed. A sheet of glass was fixed to the edge of an iron bar by this extraordinary cement, and was as firmly held as the iron or wood or prepared paper of the previous experiments with iron and wood. Many other equally curious and startling experiments were shown, and, among these, a novelty in the way of a house some forty feet in length, the sides, flooring, and roofing of which were entirely of paper. The exhibition is certainly a most interesting and instructive one.—*London Exchange.*

#### PROPOSED WATER SUPPLY FOR LONDON.

At present a large portion of the water used in London, amounting to one hundred and eight million gallons daily, is obtained by pumping from rivers, streams and wells, by means of steam engines. The strength of the engines so employed is ten thousand seven hundred and ninety horse power. It is now proposed to abandon several of the existing water works, and to bring a supply equal to the wants even of the three million persons who now reside in London, and of the four million five hundred thousand persons who are expected to reside there at the end of the present century, from the sources of the river Severn and the mountains of Wales across the whole breadth of England.

A plan of water supply for London just put forward by Mr. John Frederick Bateman, C. E., is to construct an aqueduct from Marten Mere, on the borders of Wales, to the high ground about ten miles north of London. This aqueduct is to be one hundred and eighty-three miles in length, and of sufficient size to convey a supply of two hundred and twenty million gallons of water to London daily, which is equal to twice the present supply. The lowest point in the res-

ervoirs from which this aqueduct is to be fed on the Welsh border is to be four hundred and fifty feet above the level of Trinity high-water mark. This aqueduct is to be conducted across the river Severn close to the town of Bridgenorth, and to pass near to or within a few miles of the Stourbridge, Bromsgrove, Henley-on-Arden, Warwick, Banbury, Buckingham, Aylesbury, Tring, Berkhamstead and Watford. The aqueduct is to end at Stanmore, a few miles north of London, where extensive service reservoirs are to be constructed at an elevation of two hundred and fifty feet above Trinity high water mark. From these reservoirs the water will be delivered to the city at "high pressure," and under a constant supply, amounting, when all the works are completed, to two hundred and twenty million gallons a day. The cost of supplying the quantity of one hundred and thirty million gallons a day to London is estimated at £8,600,000, and that of supplying the total quantity of two hundred and twenty million gallons at £10,850,000. The existing London water works cost £8,614,212; they produce a gross income of £702,059, and a net income of £404,585.

The works will be exceedingly simple in their construction, presenting no difficulties of an engineering character. No embankment or reservoir will be more than eighty feet in height. One of the reservoirs on the river Vyrnwy will, by an embankment seventy-six feet in height, form a lake five miles in length, and will contain one thousand and eighty-nine million cubic feet of water. Another, on the river Banw, by an embankment eighty feet in height, will form a lake four miles in length, and contain nine hundred and forty million cubic feet, and a third in the same district, by an embankment of the same height, will contain seven hundred and thirty-two million cubic feet. Amongst the reservoirs on the river Severn will be one which, by an embankment seventy-five feet in height, will contain two thousand two hundred and thirty million cubic feet of water, being fifty times greater than the available water in Loch Katrine.

#### CENSUS OF IOWA.

The census of Iowa for 1865 has been transmitted to us by His Excellency William M. Stone, Governor of the State. Besides the population by townships the volume contains the agricultural statistics for the same year and miscellaneous returns of schools, &c. As a mark in the progress of the State it is an important document.

Iowa is one of those States which has sprung up from the Western wilderness in a very few years. Thirty years ago, its inhabited portion was confined to the vicinity of Dubuque. In 1838, it was taken from Missouri and erected into a separate territory and in 1845 had so far advanced in population as to entitle it to admission into the Union. The first recorded census was taken in 1836, in which year there were within the limits of the territory covering the present State 10,351 inhabitants. Within the same limits in 1865 there were found 754,732 inhabitants. The successive steps towards this development have been as follows:

1836 (State Census).....	10,351	1850 (U. S. Census).....	192,214
1838 (do do).....	22,359	1852 (State Census).....	227,773
1840 (U. S. Census).....	43,112	1854 (do do).....	320,014
1844 (State Census).....	71,850	1856 (do do).....	503,414
1846 (do do).....	78,983	1858 (do do).....	632,549
1847 (do do).....	116,304	1860 (U. S. Census).....	674,913
1849 (do do).....	130,945	1865 (State Census).....	754,732

Here we find a population beginning at 10,000 multiply its number by nearly eight in ten years; in the next ten years the population of 1846 was multiplied by more than six and in the nine years ending with 1865 it increased thirty-three per centum. The increase from 1860 to 1865, covering a period of civil war, has been somewhat retarded, but with highly satisfactory results as shown in the tables which follow:

## POPULATION BY COUNTIES.

Counties.	1860.	1865.	Counties.	1860.	1865.
Adair.....	984	1,071	Johnson.....	17,573	18,781
Adams.....	1,533	1,818	Jones.....	13,306	14,376
Alamakee.....	12,237	13,957	Keokuk.....	13,271	13,996
Appanoose.....	11,931	10,728	Kossuth.....	416	694
Audubon.....	454	540	Lee.....	29,332	28,063
Benton.....	8,496	11,245	Linn.....	18,947	20,751
Black Hawk.....	8,244	12,306	Louisa.....	10,370	10,948
Boone.....	4,232	5,236	Lucas.....	5,766	6,352
Bremer.....	4,915	7,224	Lyon (new).....		
Buchanan.....	7,946	10,057	Madison.....	7,339	8,214
Buena Vista.....	57		Mahaska.....	14,816	17,082
Butler.....	3,724	5,006	Marion.....	16,813	18,719
Calhoun.....	147	224	Marshall.....	6,015	8,759
Carroll.....	281	400	Mills.....	4,481	5,218
Cass.....	1,612	1,895	Mitchell.....	3,409	4,176
Cedar.....	12,949	14,041	Monona.....	832	1,096
Cerro Gordo.....	940	1,311	Monroe.....	8,617	9,435
Cherokee.....	53	64	Montgomery.....	256	1,535
Chickasaw.....	4,336	5,355	Muscataine.....	16,444	17,241
Clarke.....	5,427	5,716	O'Brien.....	8	
Clay.....	53		Osceola.....		
Clayton.....	20,728	21,922	Page.....	4,419	5,211
Clinton.....	18,938	22,405	Palo Alto.....	132	216
Drawford.....	383	574	Plymouth.....	148	105
Dallas.....	5,244	5,886	Pocahontas.....	103	215
Davis.....	13,764	13,123	Polk.....	11,625	16,473
Decatur.....	8,677	8,052	Pottawattamie.....	4,968	5,388
Delaware.....	11,024	12,508	Poweshiek.....	5,668	7,796
Des Moines.....	19,511	19,894	Ridgely.....	2,923	3,089
Dickensson.....	180	300	Sac.....	246	304
Dubuque.....	31,164	33,078	Scott.....	29,959	28,474
Emmett.....	105	368	Shelby.....	818	900
Fayette.....	12,073	13,126	Sioux.....	10	
Floyd.....	3,744	4,886	Storey.....	4,051	5,918
Franklin.....	1,349	1,889	Tama.....	5,285	7,882
Fremont.....	5,044	5,698	Taylor.....	3,590	4,299
Greene.....	1,374	1,659	Union.....	2,012	2,528
Grundy.....	793	1,332	Van Buren.....	17,081	15,599
Guthrie.....	3,058	3,239	Wapello.....	14,518	18,794
Hamilton.....	1,699	2,023	Warren.....	10,281	11,560
Hancock.....	179	292	Washington.....	14,235	15,739
Hardin.....	5,440	6,813	Wayne.....	6,409	6,327
Harrison.....	3,621	4,265	Webster.....	2,504	3,773
Henry.....	18,701	17,816	Winnebago.....	168	298
Howard.....	3,168	3,871	Winneshek.....	13,942	15,421
Humboldt.....	322	606	Woodbury.....	1,119	1,295
Ida.....	43		Worth.....	756	1,143
Iowa.....	8,029	10,258	Wright.....	653	908
Jackson.....	18,493	19,097			
Jasper.....	9,883	12,065	Total, 1860.....	674,913	
Jefferson.....	15,038	14,772	Total, 1865.....		754,732

From the above, it appears that five counties made returns in 1860 that did not report in 1865. These are Buena Vista, Clay, Ida, O'Brien and Sioux, which together gave, in the first named year, the insignificant population of 170. Leaving these out of the reckoning, the census of 1860 gave a total for the State of \$674,743, and that of 1865 a total of 754,732, showing that in the quinquennial period there has been an increase of 79,989, or 11.85 to every hundred at its commencement.



## POPULATION OF CITIES, TOWNS AND VILLAGES.

Places.	1860.	1865.	*	Places.	1860.	1865.	*
Dubuque .....	13,000	15,814	15,814	Indian Village .....	619	1,081	1,081
Davenport .....	11,267	16,882	14,068	Bellevue .....	1,064	2,043	1,058
Burlington .....	6,706	10,089	8,018	Le Claire .....	1,442	1,047	1,047
Des Moines .....	2,965	5,722	5,722	Guttenburg .....	1,104	1,004	1,004
Iowa City .....	5,214	7,106	5,417	Knoxville .....	2,371	3,674	1,037
Muscatine .....	5,344	5,272	5,272	Albia .....	630	941	941
Mt. Pleasant .....	3,538	4,055	4,055	Keosauqua .....			888
Lions .....	2,703	3,292	3,107	Wapello .....	992	1,761	880
Oskaloosa .....	4,393	5,654	3,042	Sioux City .....	767	865	865
Clinton .....	1,816	3,168	2,450	Glenwood .....	613	1,247	729
Ottumwa .....	1,632	2,359	2,359	Sabula (T) .....			700
Cedar Rapids .....	1,830	2,167	2,167	Marengo .....	1,233	1,275	689
Columbus .....	1,515	2,048	2,048	Farmington .....	2,641	1,443	673
Independence .....	1,395	2,017	2,017	Camanche .....	1,468	1,221	672
McGregor .....	1,989	1,908	1,908	Walton (T) .....	1,24	1,525	671
Pella .....	1,644	1,742	1,742	Princeton .....	1,423	1,450	534
Fairfield .....	1,692	3,041	1,741	Salem (I) .....	1,386	1,800	524
Maquoketa .....	1,090	2,036	1,391	Bonaparte .....			469
Eddyville .....	917	1,361	1,361	New London (T) .....	1,993	1,754	459
Waverly (V) .....			1,278	Union City .....	334	395	395
DeWitt .....	2,361	2,132	1,169	Newburg (V) .....			250
Tipton (T) .....	1,190	1,096	1,096	Queen City .....	212	239	239

The third column, headed thus\*, shows the population of cities within the proper corporate limits. The two first columns give the population of the township, including the city. This arrangement has been adopted because, in the Federal census of 1860, the city population is not distinguished from that of the township, and hence, in order to compare the two censuses, the population of the whole territory occupied by township and city is necessarily given for both years.

It appears from this table that Iowa has now three cities of upwards of 10,000 inhabitants; three of less than 10,000, and more than 5,000; eight of less than 5,000 and more than 2,000, and thirteen of less than 2,000 and more than 1,000, and a number of cities, towns and villages of inferior population. In this enumeration city population alone is included. Comparing the township and city population of the principal places in 1860 and 1865, the following results are obtained:

	1860.	1865.	Inc.
3 cities, &c., of 10,000 and upwards .....	30,973	42,785	11,812
3 " of less than 10,000 and more than 5,000 .....	14,503	18,100	3,597
8 " of less than 5,000 and more than 2,000 .....	19,122	24,760	5,638
12 " of less than 2,000 and more than 1,000 .....	17,343	22,155	4,812
Total, 26 cities, &c. ....	81,941	107,800	25,859

—showing an increase of 31.57 per cent. for the quinquennial period. This is nearly three times the general average of the whole State. The rate of increase of the three first-class cities was 38.14 per cent.; of the three second-class cities, 24.80 per cent.; of the eight cities of 5,000 to 2,000, 29.52 per cent.; and of the twelve cities of 2,000 to 1,000, 27.81 per cent.

## BOSTON SEMI-ANNUAL DIVIDENDS.

Mr. Joseph G. Martin of Boston, sends us the following with regard to the dividends payable in that city, &c.

## BOSTON BANK DIVIDENDS.

The following table presents the capital of each Bank, together with the last two semi-annual dividends, and the amount payable on Monday, October 1.

Also, the market value of each stock, dividend on April 1, 1866, and at the present time.

A noticeable feature of the Bank dividends at this time is the great uniformity as compared with April last, the only change being old Boston Bank from 5 to 6, and Webster 5 to 4 per cent. A like instance has never before occurred among the banks in this city and it is doubtful if it ever will again. The payments are such as cannot fail to give satisfaction to the shareholders and are alike creditable to the bank managers. Of the forty-five Banks in the table, twenty-four divide 5 per cent., eight 6 per cent., eight 4 per cent., and one each of  $7\frac{1}{2}$ , 7,  $4\frac{1}{2}$ ,  $3\frac{1}{2}$  and 3 per cent., averaging a fraction over 5 per cent.

In contrast with the current rates of dividends we present those of some twenty to twenty-five years ago, when very few bank shares were selling above par. The following comprises all the banks then in operation.

	1842.	1843.	1844.	1845.		1842.	1843.	1844.	1845.
Atlantic.....	3-3	3-2	2 $\frac{1}{2}$ -2 $\frac{1}{2}$	3-3	Mechanics.....	3-2	2 $\frac{1}{2}$ -3	3-1	3-3 $\frac{1}{2}$
Atlas.....	2-2 $\frac{1}{2}$	2-2	0	3-3	Merchants.....	3 $\frac{1}{2}$ -3 $\frac{1}{2}$	3-3	3-3	3 $\frac{1}{2}$ -4 $\frac{1}{2}$
Boston.....	3 $\frac{1}{2}$ -3 $\frac{1}{2}$	3 $\frac{1}{2}$ -3 $\frac{1}{2}$	3 $\frac{1}{2}$ -3 $\frac{1}{2}$	3 $\frac{1}{2}$ -3 $\frac{1}{2}$	New Eng'd.....	3-3	3-3	2-3	3-3
City.....	0-2	2-1 $\frac{1}{2}$	2 $\frac{1}{2}$ -2 $\frac{1}{2}$	3-3	Nor'h.....	0-2	2-2	2-2 $\frac{1}{2}$	3-3
Columbian.....	3-3	3-2	2-2 $\frac{1}{2}$	2 $\frac{1}{2}$ -3	Shawmut.....	3-3	2 $\frac{1}{2}$ -2	2-2 $\frac{1}{2}$	3-3
Eagle.....	0-0	3-2	2 $\frac{1}{2}$ -3	3-3 $\frac{1}{2}$	S.&Leather.....	3 $\frac{1}{2}$ -3 $\frac{1}{2}$	3-3	3-3	3-3 $\frac{1}{2}$
Freeman.....	3 $\frac{1}{2}$ -3 $\frac{1}{2}$	3 $\frac{1}{2}$ -3 $\frac{1}{2}$	3 $\frac{1}{2}$ -3 $\frac{1}{2}$	3 $\frac{1}{2}$ -3 $\frac{1}{2}$	State.....	3-2 $\frac{1}{2}$	3-2	2-2 $\frac{1}{2}$	3-3
Globe.....	3-3	3-3	3-3	3-3	Suffolk.....	4-4	4-4	4-4	4-4
Gran'te.....	2 $\frac{1}{2}$ -2 $\frac{1}{2}$	3-2	2-3	3-3	Traders.....	0-0	0-0	2-3	3-3
Hamilton.....	3-3	3-2	2-2 $\frac{1}{2}$	3-3	Tremont.....	3-0	2-2 $\frac{1}{2}$	2 $\frac{1}{2}$ -3	3-3
Market.....	3-3	3-3	3-3	4-4	Union.....	3-3	3-2 $\frac{1}{2}$	2 $\frac{1}{2}$ -3	3-3
Mass'ch'ts.....	7-7	7-5	5-6 $\frac{1}{2}$	7-7 $\frac{1}{2}$	Washing't'n.....	2-2 $\frac{1}{2}$	1 $\frac{1}{2}$ -2	1 $\frac{1}{2}$ -2	2 $\frac{1}{2}$ -3

Bank shares are in good favor and command high rates, private sales being sometimes made at a figure materially above quoted transactions. In consequence of the small number of shares put upon the market for sale it is extremely difficult to price them accurately.

The Government has no interest maturing Oct. 1, but on the 1st of November \$23,292,684 will be due on \$776,422,800 Five-twenties outstanding Sept. 1.

The State of Massachusetts pays its interest in coin. The city of Boston will pay interest in coin on the first day of October only, and after that claims the option to pay gold or its equivalent, at the market price on that day.

Interest is also due Oct. 1 on Roxbury City 6 per cent bonds at the Treasurer's office, or Suffolk bank.

National Banks of Boston.	Capital October, 1866.	Div'ds—Amount			—Stock div'd on—	
		April, 1866.	Oct. 1866.	Oct., 1866.	April, 1866.	Sept., '66.
Atlantic, National.....	\$750,000	5	5	37,500	116	118
Atlas, National.....	1,000,000	5	5	50,000	110	115
Blackstone, National.....	1,000,000	5	5	50,000	123	130
Boston, National.....	750,000	5	5	37,500	108	115
Old Boston, National, par \$50.....	900,000	5	6	54,000	68	70
Boylston, National.....	500,000	6	6	30,000	123	135
Broadway, National.....	200,000	5	5	10,000	105	110
City, (National).....	1,000,000	4	4	40,000	108 $\frac{1}{2}$	110
Columbian, National.....	1,000,000	5	5	50,000	110	129
Commerce, (National Bank of).....	2,000,000	5	5	100,000	118	123
Continental, National.....	500,000	5	5	25,000	106	117
Eagle, (National).....	1,000,000	5	5	50,000	112 $\frac{1}{2}$	120
Eliot, National.....	1,000,000	5	5	50,000	118 $\frac{1}{2}$	123
Everett, National.....	200,000	3	3	6,000	100	102
Exchange, (National).....	1,000,000	6	6	60,000	135	140
Faneuil Hall, National.....	1,000,000	5	5	50,000	128	134
First National.....	1,000,000	6	6	60,000	135	145
Freeman's, National.....	400,000	5	5	20,000	115	120

\* Massachusetts par value \$250. Dividends given in dollars per share.

Globe, National.....	1,000,000	5	5	50,000	130	125
Hamilton, National.....	750,000	6	6	45,000	130	125
Hild and Leathet, (National).....	1,000,000	7	7	70,000	135	140
Howard, National.....	750,000	5	5	37,500	102	110
Market, National.....	800,000	4	4	32,000	105	110
Massachusetts, National, par \$250.....	800,000	5	5	40,000	115	120
Maverick, National.....	400,000	4	4	16,000	100	105
Mechanics' National.....	250,000	5	5	12,500	110	115
Merchants' National.....	3,000,000	5	5	150,000	117	123
Mount Vernon, National.....	300,000	4	4	10,000	108	120
National Bank of Redemption.....	1,500,000	4	4	40,000	...	...
New England, National.....	1,000,000	5	5	50,000	122	130
North, National.....	1,000,000	5	5	50,000	103	125
North America, (National Bank of).....	1,000,000	4½	4½	45,000	104	108
Republic, (National Bank of the).....	1,000,000	5	5	50,000	130	130
Revere, (National).....	1,000,000	6	6	60,000	130	140
Second National.....	1,000,000	7½	7½	75,000	146	150
Shawmut, National.....	750,000	5	5	37,500	108	117
Shoe and Leather, National.....	1,000,000	6	6	60,000	135	140
State, National.....	2,000,000	4	4	80,000	110	115
Suffolk, National.....	1,500,000	4	4	60,000	120	118
Third National.....	300,000	4	4	12,000	104	118
Traders' National.....	600,000	3½	3½	21,000	96½	108
Tremont, National.....	2,000,000	5	5	100,000	117	125
Union, (National).....	1,000,000	5	5	50,000	118	123
Washington, National.....	750,000	6	6	45,000	120	125
Webster, (National).....	1,500,000	5	4	60,000	110	115
Total, April, 1865.....	\$42,550,000			2,138,501		
Total, Oct., 1865.....	42,350,000			2,622,500		
Total, April, 1866.....	40,550,000			2,384,000		

## MISCELLANEOUS DIVIDENDS.

The following is a statement of the dividends and interest money to be disbursed at the dates given in October, and all payable in this city. The Berkshire Railroad, American Shoe Tip Company, Liberty Square Warehouse, Middlesex Mills, Mount Pleasant Coal, Roaring Brook Coal and Sallisbury Mills are quarterly. In addition to these, early in October is the usual period for payment of dividends by the Boylston, City, Howard, Manufacturers', Merchants', National, Neptune, Suffolk and Washington Insurance Companies, as also the Boston Exchange and Hamilton Woolen Companies, quarterly—adding, in round numbers probably \$150,000 and making the total to be paid out in October over \$330,000, including bank dividends. The Lawrence manufacturing Company passes its dividend.

The Ogdensburg and Lake Champlain Railroad pays its first dividend on the eight per cent. preferred stock, which is intended eventually to absorb the first mortgage bonds, and the directors now offer to the holders of these bonds, five thousand shares of preferred stock, free from government tax, in exchange for five hundred thousand dollars of bonds, at par, without interest, one share of stock to be given for a hundred dollar bond. This exchange is deemed a desirable one for the bond holders, and will doubtless be promptly availed of.

Payable Oct.	Names of companies, &c.	Capital, Oct., '66.	Divid's—		Amount Oct., '66.
			April, 1866.	Oct., 1866.	
5.....	American Shoe Tip Co.....	\$1,200,000	2½	2½	\$30,000
21.....	Bangor City (Municipal) 6's.....	Int. abt 1	3	3	10,000
2.....	Bangor (R.R. issues) 6's, '74.....	500,000	3	3	15,000
1.....	Bath City 6's, 1891.....	200,000	3	3	6,000
10.....	Berkshire Railroad stock.....	320,500	1½	*1½	5,800
1.....	Boston City bonds.....	Interest.	..	..	90,000
12.....	Boston Five Cents Sav. Bank.....	Interest.	..	2½	115,000
12.....	Boston Penny Savings Bank.....	Abt 90,000	..	2½	2,250

\* For Notes see page 302.

1.... Boston Mannfac. (par 750).....	600 shar's	\$50†	\$183½	80,000
1.... Boston Steam Flour Mills.....	100,000	3	3	3,000
1.... Boston and Sandwich Glass.....	400,000	12½	10	40,000
1.... Bullion Consolidated Co.....	300,000	..	25	15,000
1.... Cambridge Horse Railroad.....	727,800	4½	*4½	32,751
1.... Chelsea Horse Railroad pref.....	110,000	4	*4	4,400
1.... Eliot Fire Insurance.....	200,000	6	6	12,000
— Granite Railway.....	250,000	3	..	..
1.... Han and St Jos. L. G. bonds.....	Interest.	3½	3½	45,000
1.... Liberty Square Warehouse.....	600 shar's	\$5	\$7½	4,500
1.... Massachusetts 6's, 1868.....	150,000	3	3	4,500
1.... Massachusetts 5's, '65, '74.....	275,000	2½	2½	6,875
1.... Mass. (Troy & Gr n'd) 5's, '90.....	1,166,500	2½	2½	29,163
1.... Malden and Merose Railroad 6's.....	75,000	3	3	2,250
§ Middlesex Mills.....	750,000	5	5	37,500
1.... Michigan Central RR bonds, '82.....	4,514,500	4	4	180,580
1.... Mount Pleasant Coal.....	5,000 shs	1½	1	5,000
1.... National Dock Co. (East Boston).....	300,000	3	3	9,000
1.... New England Glass Co.....	500,000	10	10	50,000
1.... Northern N. H. RR 6's, '74.....	149,400	3	3	4,482
1.... New Bedford 5's, '77-'80.....	77,000	2½	2½	1,925
1.... Og. and Lake Cham. RR, pref.....	356,400	..	4	14,256
1.... Old Colony Railroad bonds.....	210,500	3	3	6,315
1.... Portland City 6's.....	Int. abo't	3	3	5,000
1.... Prescott Fire & Marine Ins. Co.....	100,000	4	4	4,000
4.... Roaring Brook Coal.....	250,000	6	6	15,000
3.... Salisbury Mannf.....	1,000,000	5	7½	75,000
1.... Shoe & Leather F. & M. Ins.....	200,000	5	5	10,000
1.... South Shore RR 6's, 1880.....	150,000	3	3	4,500
1.... Western Railroad 6's, 1875.....	938,000	3	3	28,140
				\$1,003,987

## PUBLIC DEBT OF THE UNITED STATES.

Abstract statement, as appears from the books and Treasurers' returns in the Treasury Department, on the 1st of August, the 1st of September and the 1st of October, 1866, comparatively ;

## DEBT BEARING COIN INTEREST.

	Aug. 1.	Sept. 1.	Oct. 1.
5 per cent. bonds.....	\$198,241,100	\$198,091,350	\$198,091,250
"    "    of 1867 and 1868.....	18,324,592	18,323,592	18,323,592
"    "    of 1881.....	283,734,100	283,734,800	283,738,750
"    "    5.20's.....	742,829,650	773,422,800	798,162,250
Navy Pension Fund.....		11,750,000	11,750,000
	\$1,242,628,442	\$1,288,322,542	\$1,310,065,94.

## DEBT BEARING CURRENCY INTEREST.

6 per cent. bonds.....	\$6,042,000	\$8,202,000	\$8,922,000
Temporary Loan.....	118,665,470	45,538,000	22,500,000
3-year Compound Interest Notes.....	156,012,140	155,512,140	155,512,140
2-year 7.30 notes.....	798,949,350	709,518,900	743,996,050
	\$1,117,222,226	\$1,079,668,960	\$930,930,190

## DEBT ON WHICH INTEREST HAS CEASED.

Various bonds and notes.....	\$4,900,430	\$4,670,160	\$23,302,372
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## DEBT BEARING NO INTEREST.

United States Notes.....	\$4 0,361,728	\$399,602,592	\$399,165,292
Fractional currency.....	26,684,139	26,483,968	27,029,273
Gold certificates of deposit.....	16,403,180	15,480,220	11,067,640
	\$452,031,603	\$443,449,047	\$437,252,205
Aggregate debt.....	\$2,770,416,009	\$2,728,314,806	\$2,701,550,709
Coin and Currency in Treasury.....	137,317,333	132,631,668	128,213,707
Debt, less coin and currency.....	\$2,633,099,276	\$2,595,683,138	\$2,573,336,941

\* Berkshire, Cambridge, and Chelsea Railroads, less Government and State taxes in October and Government tax only in April.

† The par value of Boston Manufacturing Co. is to be raised from 750 to 1,000 by an assessment of \$83½ per share and balance from reserved fund.

‡ The Bullion Consolidated dividend is monthly, and the company has divided 60 per cent or \$180,000 within a year.

§ Payable on demand.



The following statement shows the amount of coin and currency separately at the dates in foregoing table :

	Aug. 1.	Sept. 1.	Oct. 1.
Gold Coin.....	\$61,322 127	\$76,333,918	\$86,259,909
Currency .....	75,995,406	56 297,750	41,953,858
Total gold coin and currency.....	\$137,317,333	\$132,631,668	\$128,213,767

### THE PANAMA RAILROAD AND ENGLISH CAPITALISTS.

For the past two or three weeks a statement has been quite generally published throughout the country to the effect that the Panama Railroad has passed into the hands of English capitalists. This announcement was certainly a surprise, and if true, we might almost add, a national calamity. But, fortunately, we are authorized to say that there is no foundation whatever for the statement.

The rumor in question probably grew out of the action of the Columbian Congress, in June last, which has been entirely misapprehended. Our readers are most likely aware that the grant to the Panama Railroad was limited : Colombia reserving to herself the right to purchase the road in 1876 for \$5,000,000. These reserved rights the representatives of that Government have of late years made the subject of frequent negotiations with the company and others—Colombia placing great value upon them, and striving to replenish her exhausted treasury by their sale. In the early part of this year, however, General Mosquera, the Minister of Colombia to England and France, made two contracts, each of which affected the interest of the road. The first one was with William H. Catterall, solicitor, of London. This was an agreement to sell to Mr. Catterall these reserved rights, for the sum of £1 000,000, to be paid as follows : £200,000 on the ratification of the agreement by the Congress of Colombia, and £800 000 ten years hence, at the expiration of the absolute grant to the railroad. For this £1,000,000 Mr. Catterall was to obtain the position, with regard to the railroad, held by this South American Government—that is, the right to purchase for \$500,000. This agreement was to be first ratified by the Colombian Government, and then Mr. Catterall was to have the option of accepting or rejecting it.

While the ink was scarcely dry that penned this remarkable contract, General Mosquera sought another sale for Colombia's reserved rights. This time, however, a different style of agreement was entered into, the bonus to be paid taking the form of a loan. The arrangement was in substance that £1,500,000 should be given the Columbian Government, for which she should issue her bonds to an equal amount, and to secure the prompt payment of the interest she should appropriate for that purpose thirty-five per cent. of the customs duties, while the principal should be secured by the pledge of these same reserved rights in the Panama Railroad. The parties agreeing to make the loan not feeling willing to trust our sister republic, inserted a clause in the agreement to the effect that the bondholders should be allowed to station agents at the Custom-houses for the purpose of preventing any misappropriation of the thirty-five per cent. of customs duties.

These two agreements were made, as we have already stated, at about the same time, and General Mosquera sent them with all haste to the Colombian Congress to be acted upon. They came before that body at their last session, and in June a decision was reached. The first agreement, being the one entered into with Mr. Catterall, was rejected. The second agreement was amended by striking out the clause allowing European agents to be stationed in their Custom houses, and also by adding a provision forbidding the bondholders, in case of default in payment of the principal, to sell the reserved rights in the Panama Railroad except with the consent of the Colombian Government; in other words, giving a mortgage with no power, without the consent of the mortgagor, to dispose of the property mortgaged. In this emasculated form the second agreement was ratified. Of course, however, the parties proposing to make the loan refused to do so on any such security.

Out of these agreements, then, of General Mosquera, and out of these proceedings of the Colombian Congress, has arisen the rumor of the transfer of the Panama Railroad to English capitalists. The facts we have recited show not only that there is no truth in the rumor, but that for the next ten years the rights of the present owners of the road are absolute; and we have no doubt but that the parties who were able to undertake and carry through successfully that magnificent enterprise, will have the ability to wisely manage and retain it.

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#### FUEL EXPERIMENTS.

A company has been formed in London for the manufacture of a new fuel from coal waste. The refuse coal is mixed with common farina, alkali, and hot water in the proportion of eight pounds of farina, three pounds of British alkali, and twenty-five gallons of water to the ton, and the composition is kneaded by two broad rollers in a revolving mill. The mixture is then turned out by a hinged shovel into a shoot, whence it drops into a series of small buckets attached to a strap, the buckets dropping their contents down the shoots into moulding machines, where the mixture is compressed into bricks. As these fuel bricks are shaped, they are laid on open iron strap trays in small trucks, which, when full, are run on rails into tunnels closed at both ends by iron shutters, and there they are dried rapidly by hot air driven in by revolving fans.

The quality of this fuel is said to be equal to that of the coal in ordinary use, and it is excellent for gas purposes. The company get a good profit by selling it for 17 shillings (\$4.50) a ton—about \$1.50 cheaper than coal.

The use of petroleum as a substitute for coal is the subject of a parliamentary paper just issued in England. Experiments were recently made at the Woolwich Dockyard for the purpose of testing the value of petroleum for raising steam in marine boilers, with the following results: A mixture of American oil and "coal oil once run" only evaporated 7.77 pound of water per pound weight of oil, while 1 pound of Welsh coal evaporated 9 pounds to 9½ pounds of water. The experiments with "coal oil once run" alone gave a better result, the evaporation being 10½ pounds of water, but the rate of combustion of the oil and the rate of evaporation of the water per square foot of grate were low, and the smoke tubes became very foul. The best results were obtained from the use of

Burslem oil, which evaporated 18.38 pounds of water; shale oil, 17.92 pounds; and Torbraine Hill mineral oil, which evaporated 18.38 pounds. The smoke from each kind of oil was very moderate, and the tubes at the conclusion of each experiment were tolerably clean. The report concludes that if results as favorable as the three last mentioned can be obtained under ordinary circumstances, it would appear that one pound of oil will evaporate about double the weight of water which one pound of coal burnt in the ordinary way would evaporate, but, at the same time, the greater cost of oil (from £10 to £23 per ton) must be taken into consideration. If, however, a great reduction were to take place in the price of the oils, "probably under some circumstances they might be advantageously used instead of coal. The experiments, therefore, so far as they have gone, may be regarded as of considerable value in showing the great evaporative power of these oils."

#### OUR WHALING FLEET.

Notwithstanding the ravages of the pirate Sea King, alias Shenandoah, upon our whalers, it is gratifying to notice that the places of those which were destroyed are filling up rapidly. New Bedford, which suffered the most, has now 174 sail, principally ships and barks, averaging between 300 and 400 tons, of which only nine are now in port at home. Fairhaven has eleven, with only one at home; Dartmouth three, all at sea; Sippican the same number, also afloat; Westport nine, all at sea; Edgartown six, with two in port; Nantucket four, all at sea; and Provincetown forty-two, with only four in port. The whalers belonging to Provincetown are all schooners, eleven of which are under 100 tons—one of them only 75 tons—but the majority of them average about 125 tons, and all are engaged in the Atlantic whaling. This fleet has been very successful during the past five years, having made upon the average between 25 and 30 per cent. clear.

Boston has two barks, one brig and five schooners all at sea. Of these, five are manned by Mr. Hemon Smith, who owns a part in them all, and under whose auspices the business of whaling out of Boston has been revived. A fine new brig of 133 tons, named after him, has just been added to this small fleet. With a single exception, they are employed in the Atlantic whaling. The bark Arthur Pickering, at last accounts, was bound from Fayal for the Pacific.

Salem has two whalers, a brig and a schooner, and Beverly the same—all in the Atlantic. New London has twenty-three, with only two in port. Groton has a schooner in Hudson's Bay. Sag Harbor has eight, of which all are at sea, and New York, the great commercial emporium, has only one bark of 234 tons, whaling in the Atlantic Ocean.

#### RECAPITULATION.

New Bedford .....	174	New York.....	1
Fairhaven .....	11	Boston.....	8
Dartmouth.....	3	Salem.....	4
Sippican.....	3	Beverley .....	4
Westport .....	9	New London .....	23
Edgartown .....	6	Groton.....	1
Nantucket.....	4	Sag Harbor.....	8
Provincetown .....	42		
Total.....			301

Our whaling operations, though far inferior to what they were fifteen years ago, are still the most extensive in the world. England, with all her vast maritime enterprisc, has very few whalers.—*Boston Commercial Bulletin.*

## OIL AS A SUBSTITUTE FOR COAL.

A parliamentary paper, just issued, gives an account of the results of some experiments recently made at Woolwich dockyard, with the view of testing the value of petroleum and shale oil as substitutes for coal in raising steam in marine boilers. The experiments were conducted by Mr. Richardson, who had proposed a plan of employing oil instead of coal. The report of the results is not of a very decisive character, but it shows that the value of various oils for the purpose in view varies considerably. Thus, a mixture of American oil and "coal oil once run" only evaporated 7.77lb of water per pound weight of oil, while 1lb of Welsh coal evaporates 9lb to 9½lb of water. The experiments with "coal oil once run" alone gave a better result, the evaporation being 10½lb of water, but the rate of combustion of the oil and the rate of evaporation of the water per square foot of grate were low, and the smoke tubes became very foul. The best results were obtained from the use of oil, 17.92lb; and Torbaine hill mineral oil, which evaporated 18.38lb. The smoke from each kind of oil was very moderate, and the tubes, at the conclusion of each experiment, were tolerably clean. The report concludes that if results as favorable as the three last-mentioned can be obtained under ordinary circumstances, it would appear that 1lb of oil will evaporate about double the weight of water which 1lb of coal burnt in the ordinary way would evaporate, but at the same time the greater cost of oil (from £10 to £23 per ton) must be taken into consideration. If, however, a great reduction were to take place in the price of the oils, "probably under some circumstances they might be advantageously used instead of coal. The experiments, therefore, so far as they have gone, may be regarded as of considerable value in showing the great evaporative power of these oils, and the practicability of burning them according to Mr. Richardson's plan."

## RICE IN MADRAS.

We find, in a recent number of the *Madras Times*, the following account relative to the experimental cultivation of Carolina rice in Madras: The collector of Tinnevely has reported to the Government that two Tinnevely measures, equal to 1 7/17 Madras measures of Carolina rice, were sown on the 20th of September, 1865, in the best quality of channel irrigated land, in the Oorkad Estate, which bears the heaviest crops in this district, at present under the Circar management; the land was also manured, but the yield on the 9th February was one mercial, seven Tinnevely measures, or 10½ Madras measures, giving only seven and a half fold, whereas the indigenous "anikomban," or ivory rice, yields in the same locality twenty-one fold. This seed of 1865, saved from the crop of the preceding year. There is no reason alleged for the yield being so inadequate; the crops in the locality have been good. The soil is sandy clay, improved by manure and irrigation, and may, perhaps, not be adapted to this species of rice. It is suggested that when exotic grain is forwarded for trial it would be advantageous if the description of soil on which it arrives at perfection were stated, in order that, if possible, similar soils might be selected. The collector of South Arcot has been requested to forward to the collector of Tinnevely full details of the highly successful experiment lately conducted in the



South Arcot sub-division, in order that, if possible, the cause of the comparative failure in Tinnevely may be detected. Now that a large supply of Carolina seed rice is expected from the Secretary of State, it is very important that risk of failure in growing it should be guarded against as far as possible. Details of the system of cultivation pursued in America would be very valuable, and probably easily procurable.

### COAL PRODUCTS OF EUROPE AND AMERICA.

The recent report by Mr. Robert Hunt on British minerals gives, as the latest and best account of the coal produced on the continent of Europe and in America, the following returns:

	Tons		Tons.
England.....1865	58,155,587	Bavaria (coal).....1862	21,220
France.....1865	11,344,000	Zollverein (coal).....1863	16,946,707
Belgium.....1862	9,758,228	Zollverein (lignite) ..1863	5,459,494
Prussia.....1863	10,074,815	Austria (coal).....1862	5,262,800
Prussia, (brown coal).....1863	4,003,044	Austria, (lignite).....1862	1,786,679
Saxony.....1863	1,902,175	Russia.....1863	6,350,000
Saxony, (brown coal).....1864	428,615	Denmark.....1864	2,755
Grand Duchy of Baden.....1864	12,338	Sweden, annually.....	30,000
Hanover.....1863	287,415	Holland, annually (inferior).....	18,000
Hesse and Nassau.....1864	79,296	Portugal, annually.....	14,500
Electoral Hesse.....1865	308,150	Switzerland, annually.....	15,000
Electoral Hesse (brown coal).....1865	179,600	United States of America.....1864	14,503,659
Bavaria, (lignite).....1862	45,370		

The total amount of coal raised in the United States which paid the excise tax in the year ending June 30, 1865, was 17,106,449 tons.

### BOSTON.—VALUATION AND TAXATION.

The city assessors have completed their valuation of Boston property and taxes for the year, which foot up as follows:

Wards.	Real.	Personal.	Total.	Polls.
1.....	\$8,719,100	\$1,959,400	\$10,678,500	4,225
2.....	15,610,700	9,104,000	24,714,700	2,902
3.....	6,930,800	2,840,300	9,771,100	3,167
4.....	59,029,225	55,900,800	114,930,025	4,204
5.....	45,074,000	53,605,900	98,679,900	2,957
6.....	24,064,000	36,688,200	60,752,200	2,540
7.....	10,286,650	1,469,400	11,756,050	2,893
8.....	9,832,240	4,146,030	13,978,270	2,353
9.....	12,625,800	5,535,700	18,161,500	1,905
10.....	12,297,700	6,269,400	18,567,100	2,399
11.....	14,765,100	9,414,500	24,179,600	2,203
12.....	6,617,900	2,673,100	9,291,000	2,364
	225,767,215	169,595,130	415,362,345	34,192
Last year.....	201,628,900	170,203,575	371,832,475	.....
Increase.....	24,138,315	19,331,215	43,469,560	.....

The amount of money to be raised by taxation this year is \$5,274,484. The rate of taxation is as follows:

	County tax,	City tax,	Total tax.
Last year.....	\$4 44	\$11 36	\$15 80
This year.....	2 45	10 55	13 00

The number of polls is 512 less than reported last year.

Also, the market value of each stock, dividend on April 1, 1866, and at the present time.

A noticeable feature of the Bank dividends at this time is the great uniformity as compared with April last, the only change being old Boston Bank from 5 to 6, and Webster 5 to 4 per cent. A like instance has never before occurred among the banks in this city and it is doubtful if it ever will again. The payments are such as cannot fail to give satisfaction to the shareholders and are alike creditable to the bank managers. Of the forty-five Banks in the table, twenty-four divide 5 per cent., eight 6 per cent., eight 4 per cent., and one each of  $7\frac{1}{2}$ , 7,  $4\frac{1}{2}$ ,  $3\frac{1}{2}$  and 3 per cent., averaging a fraction over 5 per cent.

In contrast with the current rates of dividends we present those of some twenty to twenty-five years ago, when very few bank shares were selling above par. The following comprises all the banks then in operation.

	1842.	1843.	1844.	1845.		1842.	1843.	1844.	1845.
Atlantic.....	3-3	3-2	2 $\frac{1}{2}$ -2 $\frac{1}{2}$	3-3	Mechanics.....	8-2	2 $\frac{1}{2}$ -3	3-3	3 $\frac{1}{2}$ -3 $\frac{1}{2}$
Atlas.....	2-2 $\frac{1}{2}$	2-2	0-3	3-3	Merchants.....	3 $\frac{1}{2}$ -3 $\frac{1}{2}$	3 $\frac{1}{2}$ -3	3-3	3 $\frac{1}{2}$ -3 $\frac{1}{2}$
Boston.....	3 $\frac{1}{2}$ -3 $\frac{1}{2}$	3 $\frac{1}{2}$ -3 $\frac{1}{2}$	3 $\frac{1}{2}$ -3 $\frac{1}{2}$	3 $\frac{1}{2}$ -3 $\frac{1}{2}$	New Eng'l'd.....	3-3	3-3	2 $\frac{1}{2}$ -3	3-3
City.....	0-2	2-1 $\frac{1}{2}$	2 $\frac{1}{2}$ -2 $\frac{1}{2}$	3-3	North.....	0-2	2-2	2-2	2 $\frac{1}{2}$ -3
Columbian.....	3-3	3-2	2-2 $\frac{1}{2}$	2 $\frac{1}{2}$ -3	Shawmut.....	3-3	2 $\frac{1}{2}$ -2	2-2 $\frac{1}{2}$	3-3
Eagle.....	0-0	3-2	2 $\frac{1}{2}$ -3	3-3 $\frac{1}{2}$	S. & Leather.....	3 $\frac{1}{2}$ -2 $\frac{1}{2}$	3-3	3-3	3-3 $\frac{1}{2}$
Freeman.....	3 $\frac{1}{2}$ -3 $\frac{1}{2}$	3 $\frac{1}{2}$ -3 $\frac{1}{2}$	3 $\frac{1}{2}$ -3 $\frac{1}{2}$	3 $\frac{1}{2}$ -3 $\frac{1}{2}$	State.....	3-3 $\frac{1}{2}$	3-2	2-2 $\frac{1}{2}$	3-2
Globe.....	3-3	3-3	3-3	3-3	Suffolk.....	4-4	4-4	4-4	4-4
Gran te.....	2 $\frac{1}{2}$ -2	3-2	2-3	3-3	Traders.....	0-0	0-0	2-3	3-3
Hamilton.....	3-3	3-2	2-2 $\frac{1}{2}$	3-3	Tremont.....	3-0	2-2	2 $\frac{1}{2}$ -2 $\frac{1}{2}$	3-3
Market.....	3-3	3-3	3-3	4-4	Union.....	3-3	3-2 $\frac{1}{2}$	2 $\frac{1}{2}$ -2 $\frac{1}{2}$	3-3
Massch'ts*.....	7-7	7-5	5-6 $\frac{1}{2}$	7-7 $\frac{1}{2}$	Washing'tn.....	2-2 $\frac{1}{2}$	1 $\frac{1}{2}$ -2	1 $\frac{1}{2}$ -2	2 $\frac{1}{2}$ -3

Bank shares are in good favor and command high rates, private sales being sometimes made at a figure materially above quoted transactions. In consequence of the small number of shares put upon the market for sale it is extremely difficult to price them accurately.

The Government has no interest maturing Oct. 1, but on the 1st of November \$23,292,684 will be due on \$776,422,800 Five-twenties outstanding Sept. 1.

The State of Massachusetts pays its interest in coin. The city of Boston will pay interest in coin on the first day of October only, and after that claims the option to pay gold or its equivalent, at the market price on that day.

Interest is also due Oct. 1 on Roxbury City 6 per cent bonds at the Treasurer's office, or Suffolk bank.

National Banks of Boston.	Capital October, 1866.	Div'ds— April, Oct., 1866.	Amount Oct., 1866.	—Stock div'd on— April, Sept., '66, '27, '66
Atlantic, National.....	\$750,000	5 5	37,500	116 118
Atlas, National.....	1,000,000	5 5	50,000	110 115
Blackstone, National.....	1,000,000	5 5	50,000	123 130
Boston, National.....	750,000	5 5	37,500	108 115
Old Boston, National, par \$50.....	900,000	5 6	54,000	68 70
Boylston, National.....	500,000	6 6	30,000	123 135
Broadway, National.....	200,000	5 5	10,000	105 110
City, (National).....	1,000,000	4 4	40,000	108½ 110
Columbian, National.....	1,000,000	5 5	50,000	110 129
Commerce, (National Bank of).....	2,000,000	5 5	100,000	118 123
Continental, National.....	500,000	5 5	25,000	106 117
Eagle, (National).....	1,000,000	5 5	50,000	112½ 120
Eliot, National.....	1,000,000	5 5	50,000	118½ 123
Everett, National.....	200,000	3 3	6,000	100 102
Exchange, (National).....	1,000,000	6 6	60,000	135 140
Faneuil Hall, National.....	1,000,000	5 5	50,000	128 134
First National.....	1,000,000	6 6	60,000	135 145
Freeman's, National.....	400,000	5 5	20,000	115 120

\* Massachusetts par value \$350. Dividends given in dollars per share.

Globe, National.....	1,000,000	5	5	50,000	130	125
Hamilton, National.....	750,000	6	6	45,000	130	125
Hide and Leather, (National).....	1,000,000	7	7	70,000	135	140
Howard, National.....	750,000	5	5	37,500	102	110
Market, National.....	800,000	4	4	32,000	105	110
Massachusetts, National, par \$250.....	800,000	5	5	40,000	115	120
Maverick, National.....	400,000	4	4	16,000	100	105
Mechanics' National.....	250,000	5	5	12,000	110	115
Merchants' National.....	3,000,000	5	5	150,000	117	122
Mount Vernon, National.....	200,000	5	5	10,000	108	120
National Bank of Redemption.....	1,300,000	4	4	40,000	...	...
New England, National.....	1,000,000	5	5	50,000	122	130
North, National.....	1,000,000	5	5	50,000	108	115
North America, (National Bank of).....	1,000,000	4½	4½	45,000	104	108
Republic, (National Bank of the).....	1,000,000	5	5	50,000	120	130
Revere, (National).....	1,000,000	6	6	60,000	130	140
Second National.....	1,000,000	7½	7½	75,000	146	150
Shawmut, National.....	750,000	5	5	37,500	108	117
Shoe and Leather, National.....	1,000,000	6	6	60,000	135	140
State, National.....	2,000,000	4	4	80,000	110	115
Suffolk, National.....	1,500,000	4	4	60,000	120	118
Third National.....	300,000	4	4	12,000	104	112
Traders' National.....	600,000	3½	3½	21,000	96½	108
Tremont, National.....	2,000,000	5	5	100,000	117	125
Union, (National).....	1,000,000	5	5	50,000	118	122
Washington, National.....	750,000	6	6	45,000	120	125
Webster, (National).....	1,500,000	5	4	60,000	110	115
Total, April, 1865.....	\$12,550,000			2,138,501		
Total, Oct., 1865.....	42,350,000			2,622,500		
Total, April, 1865.....	40,550,000			2,384,000		

## MISCELLANEOUS DIVIDENDS.

The following is a statement of the dividends and interest money to be disbursed at the dates given in October, and all payable in this city. The Berkshire Railroad, American Shoe Tip Company, Liberty Square Warehouse, Middlesex Mills, Mount Pleasant Coal, Roaring Brook Coal and Salisbury Mills are quarterly. In addition to these, early in October is the usual period for payment of dividends by the Boylston, City, Howard, Manufacturers', Merchants', National, Neptune, Suffolk and Washington Insurance Companies, as also the Boston Exchange and Hamilton Woolen Companies, quarterly—adding, in round numbers probably \$150,000 and making the total to be paid out in October over \$330,000, including bank dividends. The Lawrence manufacturing Company passes its dividend.

The Ogdensburg and Lake Champlain Railroad pays its first dividend on the eight per cent. preferred stock, which is intended eventually to absorb the first mortgage bonds, and the directors now offer to the holders of these bonds, five thousand shares of preferred stock, free from government tax, in exchange for five hundred thousand dollars of bonds, at par, without interest, one share of stock to be given for a hundred dollar bond. This exchange is deemed a desirable one for the bond holders, and will doubtless be promptly availed of.

Payable Oct.	Names of companies, &c.	Capital, Oct., '66.	—Divid's—		Amount Oct., '66.
			April, 1866.	Oct., 1866.	
5....	American Shoe Tip Co.....	\$1,200,000	2½	2½	\$30,000
21....	Bangor City (Municipal) 6's.....	Int. abo't.	3	3	10,000
2....	Bangor (RR issues) 6's, '74.....	500,000	3	3	15,000
1....	Bath City 6's, 1891.....	200,000	3	3	6,000
10....	Berkshire Railroad stock.....	320,500	1½	*1½	5,600
1....	Boston City bonds.....	Interest.	..	..	90,000
12....	Boston Five Cents Sav. Bank.....	Interest.	..	2½	115,000
12....	Boston Penny Savings Bank.....	Abt 90,000	..	2½	2,250

\* For Notes see page 802.

1.... Boston Manufac. (par 750).....	600 shar's	\$50†	\$139½	80,000
1.... Boston Steam Flour Mills.....	100,000	3	3	3,000
1.... Boston and Sandwich Glass.....	400,000	12½	10	40,000
1.... Bullion Consolidated Co.....	300,000	..	½	15,000
1.... Cambridge Horse Railroad.....	727,800	4½	*4½	82,751
1.... Chelsea Horse Railroad pref.....	110,000	4	*4	4,400
1.... Eliot Fire Insurance.....	200,000	6	6	12,000
1.... Granite Railway.....	250,000	3	..	..
1.... Han and St. Jos. L. G. bonds.....	Interest.	3½	3½	45,000
1.... Liberty Square Warehouse.....	600 shar's	\$5	\$7½	4,500
1.... Massachusetts 6's, 1868.....	150,000	3	3	4,500
1.... Massachusetts 5's, '65, '74.....	275,000	2½	2½	6,875
1.... Mass. (Troy & Gr'n'd) 5's, '90.....	1,166,500	2½	2½	29,163
1.... Maiden and Merose Railroad 6's.....	75,000	3	3	2,250
1.... Middlesex Mills.....	750,000	5	5	37,500
1.... Michigan Central RR bonds, '82.....	4,514,500	4	4	180,580
1.... Mount Pleasant Coal.....	5,000 shs	1½	1	5,000
1.... National Dock Co. (East Boston).....	300,000	3	3	9,000
1.... New England Glass Co.....	500,000	10	10	50,000
1.... Northern N. H. RR 6's, '74.....	149,400	3	3	4,482
1.... New Bedford 5's, '77-'80.....	77,000	2½	2½	1,925
1.... Og. and Lake Cham. RR, pref.....	356,400	..	4	14,256
1.... Old Colony Railroad bonds.....	210,500	3	3	6,315
1.... Portland City 6's.....	Int. abo't	3	3	5,000
1.... Prescott Fire & Marine Ins. Co.....	100,000	4	4	4,000
4.... Roaring Brook Coal.....	250,000	6	6	15,000
3.... Salisbury Manuf.....	1,000,000	5	7½	75,000
1.... Shoe & Leather F. & M. Ins.....	200,000	5	5	10,000
1.... South Shore RR 6's, 1880.....	150,000	3	3	4,500
1.... Western Railroad 6's, 1875.....	938,000	3	3	28,140

\$1,003,987

## PUBLIC DEBT OF THE UNITED STATES.

Abstract statement, as appears from the books and Treasurers' returns in the Treasury Department, on the 1st of August, the 1st of September and the 1st of October, 1866, comparatively :

## DEBT BEARING COIN INTEREST.

	Aug. 1.	Sept. 1.	Oct. 1.
5 per cent. bonds.....	\$198,241,100	\$198,091,350	\$198,091,350
"    "    of 1867 and 1868.....	18,323,592	18,323,592	18,323,592
"    "    of 1881.....	283,734,100	283,734,800	283,738,750
"    "    5.20's.....	742,329,650	773,422,900	798,162,250
Navy Pension Fund.....	.....	11,750,000	11,750,000

\$1,242,628,442 \$1,288,322,542 \$1,310,065,944

## DEBT BEARING CURRENCY INTEREST.

6 per cent. bonds.....	\$6,042,000	\$8,202,000	\$8,922,000
Temporary Loan.....	118,665,470	45,538,000	22,500,000
3-year Compound Interest Notes.....	156,012,140	155,512,140	155,512,140
2-year 7.30 notes.....	798,949,350	769,518,900	743,996,050

\$1,147,222,226 \$1,079,668,960 \$930,930,190

## DEBT ON WHICH INTEREST HAS CEASED.

Various bonds and notes.....	\$4,900,430	\$4,670,160	\$23,302,372
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## DEBT BEARING NO INTEREST.

United States Notes.....	\$4,036,1728	\$399,603,592	\$399,165,252
Fractional currency.....	26,684,139	26,483,998	27,029,273
Gold certificates of deposit.....	16,408,180	15,480,220	11,057,640

\$452,031,603 \$443,449,047 \$437,252,205

Aggregate debt.....	\$2,770,416,609	\$2,728,314,896	\$2,701,550,709
Coin and Currency in Treasury.....	137,317,833	132,631,668	128,213,767

Debt, less coin and currency..... \$2,633,099,276 \$2,595,683,168 \$2,573,336,941

\* Berkshire, Cambridge, and Chelsea Railroads, less Government and State taxes in October and Government tax only in April.

† The par value of Boston Manufacturing Co. is to be raised from 750 to 1,000 by an assessment of \$33½ per share and balance from reserved fund.

‡ The Bullion Consolidated dividend is monthly, and the company has divided 60 per cent or \$180,000 within a year.

§ Payable on demand.



The following statement shows the amount of coin and currency separately at the dates in foregoing table :

	Aug. 1.	Sept. 1.	Oct. 1.
Gold Coin.....	\$61,322,127	\$76,333,918	\$86,250,909
Currency.....	75,995,306	56,297,750	41,953,859
Total gold coin and currency.....	\$137,317,333	\$132,631,668	\$128,213,767

### THE PANAMA RAILROAD AND ENGLISH CAPITALISTS.

For the past two or three weeks a statement has been quite generally published throughout the country to the effect that the Panama Railroad has passed into the hands of English capitalists. This announcement was certainly a surprise, and if true, we might almost add, a national calamity. But, fortunately, we are authorized to say that there is no foundation whatever for the statement.

The rumor in question probably grew out of the action of the Colombian Congress, in June last, which has been entirely misapprehended. Our readers are most likely aware that the grant to the Panama Railroad was limited : Colombia reserving to herself the right to purchase the road in 1876 for \$5,000,000. These reserved rights the representatives of that Government have of late years made the subject of frequent negotiations with the company and others—Colombia placing great value upon them, and striving to replenish her exhausted treasury by their sale. In the early part of this year, however, General Mosquera, the Minister of Colombia to England and France, made two contracts, each of which affected the interest of the road. The first one was with William H. Catterall, solicitor, of London. This was an agreement to sell to Mr. Catterall these reserved rights, for the sum of £1,000,000, to be paid as follows : £200,000 on the ratification of the agreement by the Congress of Colombia, and £800,000 ten years hence, at the expiration of the absolute grant to the railroad. For this £1,000,000 Mr. Catterall was to obtain the position, with regard to the railroad, held by this South American Government—that is, the right to purchase for \$500,000. This agreement was to be first ratified by the Colombian Government, and then Mr. Catterall was to have the option of accepting or rejecting it.

While the ink was scarcely dry that penned this remarkable contract, General Mosquera sought another sale for Colombia's reserved rights. This time, however, a different style of agreement was entered into, the bonus to be paid taking the form of a loan. The arrangement was in substance that £1,500,000 should be given the Colombian Government, for which she should issue her bonds to an equal amount, and to secure the prompt payment of the interest she should appropriate for that purpose thirty-five per cent. of the customs duties, while the principal should be secured by the pledge of these same reserved rights in the Panama Railroad. The parties agreeing to make the loan not feeling willing to trust our sister republic, inserted a clause in the agreement to the effect that the bondholders should be allowed to station agents at the Custom-houses for the purpose of preventing any misappropriation of the thirty-five per cent. of customs duties.

These two agreements were made, as we have already stated, at about the same time, and General Mosquera sent them with all haste to the Colombian Congress to be acted upon. They came before that body at their last session, and in June a decision was reached. The first agreement, being the one entered into with Mr. Catterralt, was rejected. The second agreement was amended by striking out the clause allowing European agents to be stationed in their Custom houses, and also by adding a provision forbidding the bondholders, in case of default in payment of the principal, to sell the reserved rights in the Panama Railroad except with the consent of the Colombian Government; in other words, giving a mortgage with no power, without the consent of the mortgagor, to dispose of the property mortgaged. In this emasculated form the second agreement was ratified. Of course, however, the parties proposing to make the loan refused to do so on any such security.

Out of these agreements, then, of General Mosquera, and out of these proceedings of the Colombian Congress, has arisen the rumor of the transfer of the Panama Railroad to English capitalists. The facts we have recited show not only that there is no truth in the rumor, but that for the next ten years the rights of the present owners of the road are absolute; and we have no doubt but that the parties who were able to undertake and carry through successfully that magnificent enterprise, will have the ability to wisely manage and retain it.

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#### FUEL EXPERIMENTS.

A company has been formed in London for the manufacture of a new fuel from coal waste. The refuse coal is mixed with common farina, alkali, and hot water in the proportion of eight pounds of farina, three pounds of British alkali, and twenty-five gallons of water to the ton, and the composition is kneaded by two broad rollers in a revolving mill. The mixture is then turned out by a hinged shovel into a shoot, whence it drops into a series of small buckets attached to a strap, the buckets dropping their contents down the shoots into moulding machines, where the mixture is compressed into bricks. As these fuel bricks are shaped, they are laid on open iron strap trays in small trucks, which, when full, are run on rails into tunnels closed at both ends by iron shutters, and there they are dried rapidly by hot air driven in by revolving fans.

The quality of this fuel is said to be equal to that of the coal in ordinary use, and it is excellent for gas purposes. The company get a good profit by selling it for 17 shillings (\$4.50) a ton—about \$1.50 cheaper than coal.

The use of petroleum as a substitute for coal is the subject of a parliamentary paper just issued in England. Experiments were recently made at the Woolwich Dockyard for the purpose of testing the value of petroleum for raising steam in marine boilers, with the following results: A mixture of American oil and "coal oil once run" only evaporated 7.77 pound of water per pound weight of oil, while 1 pound of Welsh coal evaporated 9 pounds to 9½ pounds of water. The experiments with "coal oil once run" alone gave a better result, the evaporation being 10½ pounds of water, but the rate of combustion of the oil and the rate of evaporation of the water per square foot of grate were low, and the smoke tubes became very foul. The best results were obtained from the use of

Burslem oil, which evaporated 18.38 pounds of water; shale oil, 17.92 pounds; and Torbraine Hill mineral oil, which evaporated 18.38 pounds. The smoke from each kind of oil was very moderate, and the tubes at the conclusion of each experiment were tolerably clean. The report concludes that if results as favorable as the three last mentioned can be obtained under ordinary circumstances, it would appear that one pound of oil will evaporate about double the weight of water which one pound of coal burnt in the ordinary way would evaporate, but, at the same time, the greater cost of oil (from £10 to £23 per ton) must be taken into consideration. If, however, a great reduction were to take place in the price of the oils, "probably under some circumstances they might be advantageously used instead of coal. The experiments, therefore, so far as they have gone, may be regarded as of considerable value in showing the great evaporative power of these oils."

#### OUR WHALING FLEET.

Notwithstanding the ravages of the pirate Sea King, alias Shenandoah, upon our whalers, it is gratifying to notice that the places of those which were destroyed are filling up rapidly. New Bedford, which suffered the most, has now 174 sail, principally ships and barks, averaging between 300 and 400 tons, of which only nine are now in port at home. Fairhaven has eleven, with only one at home; Dartmouth three, all at sea; Sippican the same number, also afloat; Westport nine, all at sea; Edgartown six, with two in port; Nantucket four, all at sea; and Provincetown forty-two, with only four in port. The whalers belonging to Provincetown are all schooners, eleven of which are under 100 tons—one of them only 75 tons—but the majority of them average about 125 tons, and all are engaged in the Atlantic whaling. This fleet has been very successful during the past five years, having made upon the average between 25 and 30 per cent. clear.

Boston has two barks, one brig and five schooners all at sea. Of these, five are manned by Mr. Hemon Smith, who owns a part in them all, and under whose auspices the business of whaling out of Boston has been revived. A fine new brig of 133 tons, named after him, has just been added to this small fleet. With a single exception, they are employed in the Atlantic whaling. The bark Arthur Pickering, at last accounts, was bound from Fayal for the Pacific.

Salem has two whalers, a brig and a schooner, and Beverly the same—all in the Atlantic. New London has twenty-three, with only two in port. Groton has a schooner in Hudson's Bay. Sag Harbor has eight, of which all are at sea, and New York, the great commercial emporium, has only one bark of 234 tons, whaling in the Atlantic Ocean.

#### RECAPITULATION.

New Bedford .....	174	New York.....	1
Fairhaven .....	11	Boston.....	8
Dartmouth.....	3	Salem.....	4
Sippican.....	3	Beverley.....	4
Westport.....	9	New London.....	23
Edgarton.....	6	Groton.....	1
Nantucket.....	4	Sag Harbor.....	8
Provincetown .....	42		
Total .....			301

Our whaling operations, though far inferior to what they were fifteen years ago, are still the most extensive in the world. England, with all her vast maritime enterprise, has very few whalers.—*Boston Commercial Bulletin.*

## OIL AS A SUBSTITUTE FOR COAL.

A parliamentary paper, just issued, gives an account of the results of some experiments recently made at Woolwich dockyard, with the view of testing the value of petroleum and shale oil as substitutes for coal in raising steam in marine boilers. The experiments were conducted by Mr. Richardson, who had proposed a plan of employing oil instead of coal. The report of the results is not of a very decisive character, but it shows that the value of various oils for the purpose in view varies considerably. Thus, a mixture of American oil and "coal oil once run" only evaporated 7.77lb of water per pound weight of oil, while 1lb of Welsh coal evaporates 9lb to 9½lb of water. The experiments with "coal oil once run" alone gave a better result, the evaporation being 10½lb of water, but the rate of combustion of the oil and the rate of evaporation of the water per square foot of grate were low, and the smoke tubes became very foul. The best results were obtained from the use of oil, 17.92lb; and Torbaine hill mineral oil, which evaporated 18.38lb. The smoke from each kind of oil was very moderate, and the tubes, at the conclusion of each experiment, were tolerably clean. The report concludes that if results as favorable as the three last-mentioned can be obtained under ordinary circumstances, it would appear that 1lb of oil will evaporate about double the weight of water which 1lb of coal burnt in the ordinary way would evaporate, but at the same time the greater cost of oil (from £10 to £23 per ton) must be taken into consideration. If, however, a great reduction were to take place in the price of the oils, "probably under some circumstances they might be advantageously used instead of coal. The experiments, therefore, so far as they have gone, may be regarded as of considerable value in showing the great evaporative power of these oils, and the practicability of burning them according to Mr. Richardson's plan."

## RICE IN MADRAS.

We find, in a recent number of the *Madras Times*, the following account relative to the experimental cultivation of Carolina rice in Madras: The collector of Tinnevely has reported to the Government that two Tinnevely measures, equal to 1 7 17 Madras measures of Carolina rice, were sown on the 20th of September, 1865, in the best quality of channel irrigated land, in the Oorkad Estate, which bears the heaviest crops in this district, at present under the Circar management; the land was also manured, but the yield on the 9th February was one mercial, seven Tinnevely measures, or 10½ Madras measures, giving only seven and a half fold, whereas the indigenous "anikomban," or ivory rice, yields in the same locality twenty-one fold. This seed of 1865, saved from the crop of the preceding year. There is no reason alleged for the yield being so inadequate; the crops in the locality have been good. The soil is sandy clay, improved by manure and irrigation, and may, perhaps, not be adapted to this species of rice. It is suggested that when exotic grain is forwarded for trial it would be advantageous if the description of soil on which it arrives at perfection were stated, in order that, if possible, similar soils might be selected. The collector of South Arcot has been requested to forward to the collector of Tinnevely full details of the highly successful experiment lately conducted in the



South Arcot sub-division, in order that, if possible, the cause of the comparative failure in Tinnevely may be detected. Now that a large supply of Carolina seed rice is expected from the Secretary of State, it is very important that risk of failure in growing it should be guarded against as far as possible. Details of the system of cultivation pursued in America would be very valuable, and probably easily procurable.

#### COAL PRODUCTS OF EUROPE AND AMERICA.

The recent report by Mr. Robert Hunt on British minerals gives, as the latest and best account of the coal produced on the continent of Europe and in America, the following returns:

	Tons		Tons.
England.....	1865 68,151,587	Bavaria (coal).....	1862 21,220
France.....	1865 11,300,000	Zollverein (coal).....	1 63 16,906,707
Belgium.....	1862 9,758,223	Zollverein (lignite) ..	1 63 5,459,494
Prussia.....	1863 10,074,815	Austria (coal).....	1862 5,263,288
Prussia, (brown coal).....	1863 4,003,044	Austria, (lignite).....	1862 1,786,679
Saxony.....	1863 1,902,175	Russia.....	1863 6,350,000
Saxony, (brown coal).....	1864 428,615	Denmark.....	1864 2,755
Grand Duchy of Baden.....	1864 12,338	Sweden, annually.....	30,000
Hanover.....	1863 287,415	Holland, annually (inferior).....	18,000
Hesse and Nassau.....	18 4 79,295	Portugal, annually.....	14,500
Electoral Hesse.....	1 65 308,150	Switzerland, annually.....	15,100
Electoral Hesse (brown coal) ..	1865 179,600	United States of America.....	1864 14,593,659
Bavaria, (lignite).....	1862 45,570		

The total amount of coal raised in the United States which paid the excise tax in the year ending June 30, 1865, was 17,106,449 tons.

#### BOSTON.—VALUATION AND TAXATION.

The city assessors have completed their valuation of Boston property and taxes for the year, which foot up as follows:

Wards.	Real.	Personal.	Total.	Polls.
1.....	\$8,719,100	\$1,959,400	\$10,675,500	4,225
2.....	15,610,700	9,104,000	24,714,700	2,902
3.....	6,930,800	2,840,300	9,771,100	3,167
4.....	59,029,225	55,900,800	114,930,025	4,204
5.....	45,074,000	53,605,900	98,679,900	2,957
6.....	24,064,000	36,688,200	60,752,200	2,540
7.....	10,286,650	1,469,400	11,756,050	2,893
8.....	9,832,240	4,146,030	13,982,270	2,353
9.....	12,625,800	5,535,700	18,161,500	1,905
10.....	12,297,700	6,269,400	18,477,100	2,399
11.....	14,765,100	9,414,500	24,179,600	2,203
12.....	6,617,900	2,673,500	9,291,400	2,364
	225,767,215	189,595,130	415,362,345	34,192
Last year.....	201,628,900	170,263,875	371,892,775	.....
Increase.....	24,138,315	19,331,215	43,469,560	.....

The amount of money to be raised by taxation this year is \$5,274,484. The rate of taxation is as follows:

	County tax,	City tax.	Total tax.
Last year.....	\$4 44	\$11 36	\$15 80
This year.....	2 45	10 55	13 00

The number of polls is 512 less than reported last year.

## COMMERCIAL CHRONICLE AND REVIEW.

The loan market for the month—Statement of the public debt very favorable—Trade for September—Regulations for collecting cotton tax—Western trade—Treasure movement—Course of gold—Prices of governments—American securities and consols at London, etc., etc.

The Money Market is still plethoric with idle capital and disappointing to lenders, who have at times no small difficulty in finding remunerative, safe employment for their surplus balances. It has been anticipated that, as has been usual in former years, we should see the development this fall of considerable activity in the Loan Market, followed by an increase in the rate of interest, if not by some occasional spasm of temporary stringency. Whoever has carefully watched the ebb and flow of the bank loans and deposits, as indicated by the annual and weekly returns of the Clearing House, must have noticed a remarkable coincidence of movement at the fall of the year. The loans usually reach their highest expansion about the months of August or September, when the aggregate gradually sinks, till, in November or December, the decline is checked and an upward turn takes place. Another falling off usually begins in March or April, preliminary to the uniform expansion which culminates in August. There is thus a spring tide and a neap tide in the current of bank loans, with, of course, a corresponding series of movements in the volume of the deposits. Judging from analogy, therefore, it has been anticipated that we should have an active Money Market, a calling in of loans, a depletion of the deposits, and a commensurate abridgement of the power of the banks and lending institutions to give to their customers monetary accommodation. As yet, however, there are no indications that the prevailing ease will be soon disturbed, except they be found in the mania for speculation, which seems all at once to have seized the community. Such excitement is the result of an expansion of credit, for which the banks are in no small degree to blame, and is generally followed by a reaction, resulting in a disturbance in monetary affairs. This may be the case now, and there is therefore reason enough for caution and for avoiding all long credits. Below, we give the current rates of loans and discounts for each week of the month:

### RATES OF LOANS AND DISCOUNTS.

	Sept. 7.	Sept. 14.	Sept. 21.	Sept. 28.
Call loans .....	4 @ -	4 @ 5	4 @ 5	4 @ -
Loans on Bonds and Mortgage .....	6 @ 7	6 @ 7	6 @ 7	6 @ 7
A 1, endorsed bills, 2 mos. . . . .	5 @ -	5 @ -	5 @ -	5 @ -
Good endorsed bills, 3 & 4 mos. ....	5 @ 5½	5 @ 6	5 @ 6	5 @ 6
“ “ single names.....	6 @ 7	6 @ 7	6 @ 7	6 @ 7
Lower grades.....	9 @ 15	9 @ 15	9 @ 15	9 @ 12

The statement of the public debt, which we give this month, is very satisfactory. The sixty millions of dollars which have been gathered into the Treasury during the past two months, on account of the income tax, seem to have been employed almost exclusively in paying off the principal of our national debt. On the 1st August the aggregate of the debt was \$2,633,000,000, and the amount now is \$2,573,000,000, showing a reduction during the sixty days of just \$60,000,000, or an average of one million a day. Of course it would be puerile to

expect that we shall go on paying our debt during the remaining months of the fiscal year with the same continuous rapidity ; but the fact that the receipts from income tax during the first year after the close of the war have been exclusively devoted to the liquidation of the principal of the debt is extremely gratifying, and will tend to give greater stability both at home and abroad to our national credit. Moreover, it is pleasant to find that those parts of our debt have been selected for payment which threatened embarrassment to the Treasury. We refer to the short date securities, the temporary loans, and the certificates of indebtedness. Both these classes of short loans were at times the cause of trouble, inasmuch as at frequent intervals the holders drew large amounts of greenbacks from the Treasury, and thus the volume of our floating currency was liable to receive a sudden increase, to the injury of business and to the disturbance of general prices.

The statement also shows the issue of nearly \$22,000,000 of Five twenties, and the calling in of \$25,500,000 of Seven-thirties. Some \$86,000,000 of these three-year Seven-thirty notes have been withdrawn since the beginning of Mr. McCulloch's negotiations in regard to them. The progress is indeed slow, but it is very satisfactory as far as it has gone ; for, contrary to the predictions of many persons, the prices of Government securities have not been at all depressed, but, on the contrary, they are considerably higher now than when the purchases of the Seven-thirties were first started.

We observe that the Treasury balance now comprises \$14,000,000 less of currency than on the 1st September, together with \$14,000,000 more of coin, if we make allowance for the gold certificates, which amount to \$11,000,000 now, against \$15,000,000 the previous month. Altogether, the October statement of the debt may be regarded as, in all important respects, one of the most satisfactory that has ever proceeded from the Treasury. It is reported that Mr. McCulloch is buying up the gold bearing sixes of 1867 and 1868. We see from the report that the rumor is without foundation, except, indeed, there be some small amount which has not yet been put through the books of the Department. We are assured that just now no purchases whatever of these bonds are making on the part of the Government.

The course of trade during September has been of a generally satisfactory character. The fears entertained by some, at the opening of the Fall business, that the markets would prove to be over-supplied with goods have not been realised. On the contrary, the large representation of buyers from all sections of the country have proved to have wants fully equal to the supply of merchandise ; and, with a steady, healthy demand, the course of prices has been even and satisfactory to holders. Although the Fall season is by no means closed, yet the markets are bare of many leading classes of goods, and on some kinds of domestic manufactures prices show an upward tendency, partly induced by scarcity. The South has required a large amount of merchandise ; but it is deserving of note that the class of goods taken for that market now includes less of the fine, costly descriptions bought before the war, and also a much smaller proportion of the very common materials which in former times were required for clothing the slaves, the wealthy classes now buying less costly goods, and the negroes being able to clothe themselves with better fabrics. Southern merchants

have shown some anxiety to open credits, alleging as a reason that it must be late before their people can realise upon the cotton crop; as a rule, however, our merchants have not deemed it prudent to extend credit to that section until political affairs become more settled.

The regulations of the Treasury Department for ascertaining and collecting the tax upon raw cotton threaten to involve much inconvenience both to the producer and to the Government, which seem to be unnecessary, and if so, ought to be obviated. It cannot be expected that the cultivation of that staple will be pursued extensively if the annoyances and other inconveniences incident to carrying out the law are too aggravated for common patience, and we have no doubt that the Government will carefully reconsider the matter, and modify, so far as may be, the instructions lately issued, adopting the simplest and most inexpensive measures it is able under the law to adopt, for the weighing of cotton and the collection of the tax. This is but the commonest dictate of justice and good policy. The act of July, 1866, requires the tax of three cents a pound to be paid to the Collector of Internal Revenue for the district in which the cotton shall have been produced, except in cases where permits have been duly obtained of the assessor upon the giving of proper security for the amount due the Government. This provision obliges the assessor to visit each plantation to superintend the weighing, or compels the planter to haul it to some point designated, saddling upon him the expenses of this moving or the charges of the assessor. In the event of delay there are great liabilities of losing favorable opportunities for shipping the crop to market. It is not practicable for the assessors to visit all the plantations and weigh the cotton without increasing their number to an undue extent. Besides the difficulties in the way of a proper performance of their duty constitute a strong temptation to give certificates of weight without actually seeing the cotton, and are liable accordingly to lead to fraud.

The regulations of the Department authorize the designation of particular places for weighing points, to which the planters are required to bring their cotton. Complaint is made that these places are so inconvenient and inaccessible, that the cost of removing the cotton thither would be double that of transporting it to a seaport town. The majority of the points to which it is usually shipped have not been selected for weighing points. The Government can derive no special benefit from this incurring of unnecessary expense.

The producers, besides, generally depend upon the proceeds of the sale of their cotton for the means to pay the tax. The present system, therefore, obliges them to dispose of their crops to speculators at a sacrifice, or they must give bond for payment before they can be allowed remove their cotton from the district. In those cases in which they have followed the old practice of obtaining advances from merchants, this bond interferes badly with the arrangement. It places the cotton under control of the revenue officers, and enables the collector to send it to a bonded warehouse before transferring it to the merchant, thus making unnecessary expense to both parties. There are other impediments which the regulations create, the effect of which will be to discourage the production of the staple altogether. Every obstacle in the way of its rapid passage to market is a positive injury to the country, as well as to the planter; for the latter, in event of his being unable to send his crop to market without



sacrificing a large part of the proceeds, will necessarily turn his attention to the growing of other products instead, which are free of these disabilities. It is the interest of all of us that the production of this staple should be stimulated, not fettered.

The cotton factors and merchants of New Orleans, apprehensive of embarrassment from the enforcement of the present system of regulations, held several meetings during the month of September to devise modifications which the exigencies of the cotton trade seemed to require. A memorial was prepared and addressed to Mr. McCulloch, the Secretary of the Treasury, setting forth that the existing regulations are exceedingly onerous, and, as they conceive, not well adapted to protect the interests of the Governments. The object of the law imposing a tax upon cotton they very rightly consider to be to collect the amount levied at the smallest cost, in the shortest time possible, and with the least expense, inconvenience and annoyance to the citizens who pay the tax. They accordingly suggest that all the cotton growing States shall be arranged into a single district for the purpose of collecting the tax. The power to do this they claim is conferred by the seventh section of the Internal Revenue Act of 1864 which authorizes the President "to alter the respective collection district" as the public interests may require. We see, however, that the Attorney General has written an opinion to the effect that under the law the Government has not the power claimed. If this be so the necessary legislation can without doubt be easily obtained, and in the meantime such modifications should be made in the present regulations as may be possible and may tend to remove the difficulties and disabilities referred to.

Trade with the West has not been so extensive as might have been expected from the anticipation of large crops. A conservative spirit appears to pervade the trade of that section; and, as their collections have not proved very satisfactory in some districts, there is a disposition to confine credits within moderate limits. The injury to the corn crop has had a depressing effect upon the trade of Illinois and Ohio, which, however, during the last few days, has been counteracted by the reports of injury to the grain crops of Great Britain, warranting the expectation of a large demand for our cereals for export.

In some quarters, there have been symptoms of a disposition to extend credit operations; but, as a rule, our jobbers are disinclined to encourage time transactions, and it may perhaps be safely affirmed that there has been but little departure from the strictly conservative terms upon which business has been conducted since the beginning of the war. The limited amount of credit transactions, however, is perhaps attributable to the extreme abundance of currency as much as to the indisposition of traders to do business upon time.

The usual flow of currency from East to West for moving the crops has not made its appearance until the close of September, a period somewhat later than in former years; and, owing to the extreme abundance of money idle in the banks, the demand has not had its usual effect upon the money market, the rate remaining, through the month, steady at 4 per cent. on call. The most pointed indication of the extreme ease of the money market is in the fact that, on the Treasury notifying the banks to present \$12,500,000 of Clearing House certificates for redemption on the 25th ult., the banks allowed the currency to remain

in the Sub-Treasury, free of interest, simply to retain the use of the certificates in Clearing House settlements, a plain acknowledgement that they could find no use for the money.

The course of the gold market has been comparatively steady. The demand for customs has been very nearly met by the importations from California and Europe; and speculative movements, to force up the premium, have consequently made no progress. The receipts of gold from California for the month amount to \$2,884,432. Since January 1st, we have received from that source \$30,500,000, which exceeds the receipts for the corresponding months of any of the last seven years. It is important, however, to remember that eight millions of the receipts was destined for the Sub Treasury. The transatlantic receipts for the month have not been officially reported, but are estimated at the unusually high figure of \$7,500,000. These importations appear to be due, on the one hand, to our having remitted to Europe during the panic in London in excess of our actual liabilities; and, on the other, to the subsequent large exportation of Fifties.

## MOVEMENT OF TREASURE AT NEW YORK.

Months, &c.	California.	New Supply.		Exports to for. ports.	Excess of—	
		Foreign.	Total.		Supply.	Export.
January.....	\$1,485,316	\$72,771	\$1,558,087	\$2,706,326	\$.....	\$1,148,249
February.....	3,603,000	172,122	3,775,122	1,807,030	1,968,092	.....
March.....	3,958,291	285,854	4,244,145	1,045,039	3,199,106	.....
April.....	1,530,321	161,817	1,701,138	588,875	1,112,263	.....
May.....	3,992,148	393,073	4,385,221	23,744,194	.....	19,358,973
June.....	1,842,271	91,549	1,933,820	15,890,956	.....	13,954,136
July.....	6,754,669	345,961	7,100,630	5,821,459	1,278,171	.....
August.....	4,477,659	269,221	4,746,880	1,587,851	3,159,029	.....
September.....	2,884,432*	7,500,000†	10,384,432	808,950	9,575,482	.....
Jan. Aug. '66.....	\$30,537,197	\$9,295,368	\$40,834,475	\$54,000,690	\$.....	\$13,168,215
do do '65.....	13,751,750	1,695,459	15,447,209	22,670,116	.....	7,222,907
do do '64.....	8,864,530	1,859,144	10,723,674	34,935,362	.....	24,212,188
do do '63.....	9,604,312	1,228,121	10,832,433	32,846,496	.....	22,014,063
do do '62.....	18,655,651	944,577	19,600,228	42,834,139	.....	23,233,911
do do '61.....	28,236,403	35,186,730	63,423,133	3,279,514	60,143,319	.....
do do '60.....	25,529,924	1,152,627	26,682,551	39,456,375	.....	12,773,824
do do '59.....	29,219,714	1,833,054	31,052,768	55,925,860	.....	24,573,092

The price of gold has fluctuated during the month between 147½ and 143¼—a fraction above the price for the corresponding month of last year, as will appear from the following quotations for each day of the month:

## COURSE OF GOLD FOR SEPTEMBER.

Date.	Open'g	High'st	Lowest	Closing	Date.	Open'g	High'st	Lowest	Closing
Saturday.....	1 147½	147½	145½	145½	Wednesday.....	19 145½	145½	145	145½
Sunday.....	2 147½	147½	145½	145½	Thursday.....	20 145	145	144½	144½
Monday.....	3 145	145½	144½	145½	Friday.....	21 143½	144	143½	143½
Tuesday.....	4 145½	146½	145½	146½	Saturday.....	22 143½	143½	143½	143½
Wednesday.....	5 146½	147	146½	146½	Sunday.....	23 143½	143½	143½	143½
Thursday.....	6 146	146½	145½	145½	Monday.....	24 143½	144½	143½	144½
Friday.....	7 145½	146½	145½	146½	Tuesday.....	25 144½	144½	144½	144½
Saturday.....	8 146½	147½	146½	146½	Wednesday.....	26 144½	145½	144½	145
Sunday.....	9 146½	146½	146½	146½	Thursday.....	27 145½	145½	144½	145
Monday.....	10 146½	146½	146½	146½	Friday.....	28 144½	145½	144½	145½
Tuesday.....	11 146½	146½	145½	145½	Saturday.....	29 145½	146½	145½	146½
Wednesday.....	12 146½	146½	145½	146½	Sunday.....	30 145½	146½	145½	146½
Thursday.....	13 146½	146½	145½	145½					
Friday.....	14 145½	145½	144½	145	Sept....1866.....	147½	147½	143½	146½
Saturday.....	15 144½	144½	144	144½	" 1865.....	144½	145	142½	144
Sunday.....	16 144½	144½	144	144½	" 1864.....	245	254½	191	193
Monday.....	17 144½	145½	144½	145½	" 1863.....	127	143½	126½	141½
Tuesday.....	18 144½	145½	144½	145	" 1862.....	116½	124	116½	123½

\* The Arizona which arrived from Aspinwall on the 1st October brought \$1,137,149, of which \$1,109,537 was from California. This is properly due to the September account, and if added to the actual September receipts makes the total supply from California for that month \$3,993,969. † Estimated.

Below, we give the sale prices at the New York Stock Exchange of Government Securities, represented by the closing sale each day during the month of September, 1866 :

## PRICES OF GOVERNMENT SECURITIES, SEPTEMBER, 1866.

Day of month.	—6's, 1881.—		—6's, 5-20 yrs.—		—5's, 10-40 yrs.—		7-30's, 1867.	1 y'r certif.
	Coup.	Reg.	Coup.	Reg.	Coup.	Reg.		
Saturday... 1	.....	.....	112½	108½	99	.....	107½	.....
Sunday..... 2	.....	.....	.....	.....	.....	.....	.....	.....
Monday..... 3	.....	.....	112	.....	.....	.....	107½	.....
Tuesday... 4	112	.....	111½	.....	99	.....	107½	.....
Wednesday 5	112	112	111½	.....	99	.....	106½	.....
Thursday... 6	111	.....	111½	.....	98½	98½	106½	.....
Friday..... 7	111½	.....	111½	108½	98½	.....	106½	.....
Saturday... 8	.....	111½	111½	108½	98	.....	106	.....
Sunday..... 9	.....	.....	.....	.....	.....	.....	.....	.....
Monday... 10	.....	111	.....	108½	98	98½	106	.....
Tuesday... 11	.....	.....	111½	.....	.....	.....	106	.....
Wednesday 12	.....	111½	110½	108½	98	98½	106	.....
Thursday... 13	111	.....	110½	108½	98	.....	105½	.....
Friday..... 14	111½	.....	111½	.....	98½	.....	106	.....
Saturday... 15	111½	.....	111½	108	98½	.....	106½	.....
Sunday... 16	.....	.....	.....	.....	.....	.....	.....	.....
Monday... 17	.....	111½	111½	.....	98½	98½	105½	.....
Tuesday... 18	111½	.....	111½	.....	99½	.....	106	.....
Wednesday 19	111½	.....	111½	.....	99½	.....	106	.....
Thursday... 20	111½	111½	111½	.....	.....	.....	106½	.....
Friday..... 21	111½	111½	111½	108½	99	.....	.....	.....
Saturday... 22	111½	.....	111½	108½	.....	.....	105½	.....
Sunday... 23	.....	.....	.....	.....	.....	.....	.....	.....
Monday... 24	111½	111½	111½	108½	97½	.....	105½	.....
Tuesday... 25	111½	.....	111½	.....	99	99	106	.....
Wednesday 26	111½	111½	111½	.....	98½	.....	105½	.....
Thursday... 27	111½	111½	111½	.....	99	.....	106	.....
Friday..... 28	111½	111½	111½	108½	99½	.....	106½	.....
Saturday... 29	.....	.....	112	.....	99½	.....	106½	.....
Sunday... 30	.....	.....	.....	.....	.....	.....	.....	.....
Opening... ..	112	112	108½	108½	99	98½	107½	.....
Highest.....	112	112	113½	108½	99½	99	107½	.....
Lowest.....	111	111	108½	108½	98	98½	105	.....
Closing.....	111½	111½	112	108½	99½	99	106½	.....

The following are the closing quotations of the leading stocks on Friday of the last seven weeks :

	Aug. 17.	Aug. 24.	Aug. 31.	Sep. 7.	Sep. 14.	Sep. 21.	Sep. 28.
Cumberland Coal.....	47½	47½	47½	46½	46½	48	55½
Quicksilver.....	51	.....	49½	50½	57½	.....	53½
Anton Co.....	.....	.....	52½	.....	52½	54	54½
Mariposa pref.....	.....	28	.....	28	30½	33½	30½
New York Central.....	104½	104	103½	103½	106½	106½	114½
Erie.....	69½	73	73½	71	73½	75½	79½
Hudson River.....	.....	.....	.....	120½	122	120½	124½
Reading.....	115½	115½	118½	114	115½	115	116½
Michigan Southern.....	85½	85½	84½	84	83½	83½	85½
Michigan Central.....	111	114	112	.....	111	118	114½
Cleveland and Pittsburg	87½	87½	86½	86½	.....	87	89½
Cleveland and Toledo....	116	116	115½	114½	116	117½	121½
Northwestern.....	35½	36½	35½	35½	34½	35½	37½
" preferred..	67½	68½	67½	.....	66½	67½	71
Rock Island.....	107	109½	108½	109	109	111	112
Fort Wayne.....	104½	104½	104½	104½	105	105½	107½
Illinois Central.....	122½	123½	123½	122	122½	121½	123½

United States securities have shown much firmness in the foreign markets. Five-twenties have sold at London as high as 73½, and as low as 71½, notwithstanding the very large amount received from this side. It is significant that one of the first impulses of the reaction from a great panic should be to invest largely in the bonds of the United States Government. Other American securities have also exhibited increased firmness at London. Illinois Central has ranged at 77½ to 80, and Erie at 44½ to 48. We append the daily quotations for Consols and American Securities at London for September, as reported by the cable :

## COURSE OF CONSOLS AND AMERICAN SECURITIES AT LONDON—SEPTEMBER, 1866.

Date.		Cons for mon.	Am. U. S. 5-20s	Ill. C. sh's.	Erie sh's.	Date.		Cons for mon.	Am. U. S. 5-20s	Ill. C. sh's.	Erie sh's.
Saturday	1	89%	73%	80	46	Tuesday	18	89%	72%	78%	47%
Sunday	2	.....	.....	.....	.....	Wednesday	19	89%	72%	78%	47%
Monday	3	89%	73%	79%	46%	Thursday	20	89%	72%	78%	47%
Tuesday	4	89%	72%	79%	46%	Friday	21	89%	72%	78%	48
Wednesday	5	89%	73	79%	46%	Saturday	22	89%	72%	78%	48
Thursday	6	89%	72%	79	46%	Sunday	23	.....	.....	.....	.....
Friday	7	89%	72%	78%	45	Monday	24	89	71%	78	48
Saturday	8	89%	72%	78%	45	Tuesday	25	89%	71%	77%	47%
Sunday	9	.....	.....	.....	.....	Wednesday	26	89%	71%	78	47%
Monday	10	89%	72%	78%	45	Thursday	27	89%	71%	77%	47%
Tuesday	11	89%	71%	78%	44%	Friday	28	89%	71%	77%	47%
Wednesday	12	89%	71%	78	44%	Saturday	29	*No	tele	gram	.....
Thursday	13	89%	72%	79%	45%	Sunday	30	.....	.....	.....	.....
Friday	14	89%	73	79%	45%	Highest	.....	89%	73%	80	48
Saturday	15	89%	72%	78%	45%	Lowest	.....	89	71%	77%	44%
Sunday	16	.....	.....	.....	.....						
Monday	17	89%	72%	78%	46%						

The causes indicated above, as having induced a return current of specie, have also produced a severe depression in the rates of foreign exchange. At the beginning of the month, prime bankers' 60 days' bills sold as low as 106½, or about 3 per cent. below the par of exchange. Subsequently, the purchase of large amounts of bills on speculation and the curtailment of the supply of cotton bills produced a sudden advance in quotations; and, at the close of the month, prime 30 days' bankers' bills were held at 103½@108½.

## COURSE OF FOREIGN EXCHANGE FOR SEPTEMBER.

Days.	London. cents for 54 pence.	Paris. centimes for dollar.	Amsterdam. florin.	Bremen. cents for rix daler.	Hamburg. M. banco.	Berlin. cents for thaler.
1.....	105½@106%	545 @535	39 @40	75½@76%	35 @35½	68½@69%
2.....	105½@106%	542½@535	39 @40	75½@76%	35 @35½	68½@69%
3.....	105½@106%	542½@535	39 @40	75½@76%	35 @35½	68½@69%
4.....	105½@106%	541½@532½	39 @40	76 @77½	35 @35½	69 @70½
5.....	105½@106%	540 @532½	39 @40	76 @77½	35 @35½	69½@70½
6.....	106 @106½	540 @532½	39 @39½	75½@77	35 @35½	69½@70½
7.....	106 @106½	540 @532½	39 @39½	75½@77	35 @35½	69½@70½
8.....	105½@106%	541½@531½	39 @39½	75½@77	35 @35½	69½@70½
9.....	105½@106%	535 @530	39 @40	76½@77½	35 @35½	69½@70½
10.....	106 @106½	535 @527½	39½@40	76½@77½	35 @35½	69½@70½
11.....	106½@109	530 @525	39½@40½	76½@77½	35½@36	70 @71
12.....	107 @107½	530 @525	39½@40½	77 @78	35½@36	70 @71
13.....	107 @107½	532½@525	39½@40½	77 @78	35½@36	70 @71
14.....	107 @107½	530 @525	39½@40½	77 @77½	35½@36	70 @71
15.....	107 @107½	530 @525	39½@40½	77 @77½	35½@36	70 @71
16.....	106½@107½	530 @525	39½@40½	77 @77½	35½@36	70½@71½
17.....	106½@107½	530 @525	39½@40	77 @77½	35½@36	70½@71½
18.....	106½@107½	530 @525	39½@40	77 @78	35½@36½	70½@71½
19.....	107 @107½	527½@525	39½@40	77 @78	35½@36½	70½@71½
20.....	107 @107½	530 @525	39½@40½	77 @78	35½@36½	70½@71½
21.....	107 @107½	530 @525	39½@40½	77 @78	35½@36½	70½@71½
22.....	107 @107½	530 @525	39½@40½	77 @78	35½@36½	70½@71½
23.....	107½@108	527½@522½	40 @41½	77½@78½	35½@36½	71 @71½
24.....	107½@108	525 @520	40½@41½	78 @78½	35½@36½	71½@71½
25.....	108 @108½	523½@522½	40½@41	78 @78½	35½@36½	71½@72
26.....	108½@108½	523½@520	40½@40½	78 @78½	35½@36	71 @72
27.....	108 @108½	523½@518½	40½@40½	78 @78½	35½@36½	71½@72
28.....	108 @108½	523½@518½	40½@40½	78 @78½	35½@36½	71½@72
29.....	108 @108½	523½@518½	40½@40½	78 @78½	35½@36½	71½@72
30.....	.....	.....	.....	.....	.....	.....
Sep.....	105½@108%	545 @518½	39 @41½	75½@78½	35 @36½	68 @72
Aug.....	105½@108%	545 @517½	39 @41	75 @79	34½@37	68 @73
July.....	107½@109½	525 @507½	40 @42	77 @79	36 @37½	72 @75½
June.....	107½@110	205 @507½	40 @42½	77 @80	35½@37½	73 @75
May.....	108½@109½	520 @510	40½@42½	78½@80	36 @37½	71 @74
Apr.....	106½@108½	537½@517½	39½@41	76½@78½	35 @36½	69½@71½
Mar.....	106½@108½	530 @518½	40 @41	77 @78½	35½@36½	70½@71½
Feb.....	107½@108½	532½@517½	40½@41	77 @79	35½@36½	70½@71½
Jan.....	108 @109½	523½@515	40½@41	78 @79½	36 @36½	71 @71½
9 mos.....	105½@109%	545 @507½	39 @42½	75 @80½	34½@37½	68 @75½

\* No report for Saturday, September 29, came to hand.



There has been no demand of importance for Five-twenties for export, the foreign market having been supplied abundantly, perhaps to excess, by the shipments of August. The price of bonds and of Treasury notes has, however, declined but a fraction from the average quotations of August, the demand from domestic sources for supplying large idle balances having helped to sustain prices.

The amount of transactions in Government securities, State, city and railroad bonds at the Stock Boards for last month are given below; the sales at the Boards, however, represent but a small portion of the aggregate operations in Governments, and are an imperfect criterion of the business really done:

## SALE OF BONDS—SEPTEMBER.

U. S. Bonds.....	\$6,451,300	Railroad Bonds.....	\$879,200
U. S. Notes.....	2,425,350		
State and City Bonds.....	2,384,000	Total Bonds and Notes.....	\$12,739,850

The course of stock speculation since the middle of the month has been steadily upward. Under the purchase of wealthy firms, prices have advanced above anything realised since the wild operations of 1864.

The following statement shows the prices of leading shares at the close of the month, compared with the highest and lowest figures of 1864:

1864				1864			
Low't.		High't.	Sep 29	Low't.		High't.	Sep 29
New York Central.....	109	145	114½	Illinois Central.....	110½	138	123½
Erie.....	82	126½	80½	Clev. & Pittsburg.....	90	132	89½
Hudson.....	107	164	124½	Northwestern.....	34	88	37½
Reading.....	111	165	116½	do prefer'd.....	61	97	73
Michigan Central.....	114½	157	115	Rock Island.....	85½	149½	112
Michigan Southern.....	57	118½	87	Fort Wayne.....	82½	152½	108

The total transactions in stocks at both Boards, for September, aggregate 1,427,014 shares, against 1,241,075 shares in August.

## JOURNAL OF BANKING, CURRENCY, AND FINANCE

Clearing House refusal to make clearances in bank notes—Redemption of National Bank circulation, defects in the present law—Bank returns of the three cities.

The Clearing-House, at its annual meeting, did a very creditable thing in deciding by an almost unanimous vote that National Bank notes shall not be used instead of greenbacks in making the daily settlements between the Associated Banks. These settlements should be made in cash. It is demanded both by the Constitution of the Association and by the exigencies of the case that nothing but "money" should settle these daily balances. Now National bank notes, as has been well observed, are not money, they are only promises to pay it on demand. Once permit any bank to settle its Clearing-House engagements by its "promises to pay," or by the "promises" of other banks weaker perhaps than itself, and you would introduce an element of disorganization into the financial system which must eventually prove its sure destruction. This would be the case were the value of National Bank notes protected by metropolitan redemption. But while this redemption is not provided for the proposition is absurd, and the wonder is that any one could be found outside of the circle of those that pursue private benefit instead of the benefit of the

country, who would so far risk his reputation for wisdom and financial perspicacity as to propose a change so fatal, so revolutionary, so compromising to the permanence of our National banking system. Consequently, although we do not impugn the motives of the very small minority who expressed themselves in its favor, we do rejoice that there is so great a preponderance of influential opinion, and so resistless a force of intelligent determination, in favor of the principles and the practice of sound banking.

The subject of bank note redemption has come up very prominently of late, the convention of Western bankers having decided that they would prefer to dispense with metropolitan redemption because of its expensiveness to them.

They would rather enjoy the full profits of a circulation throughout all parts of the country, while making no provision at all for central redemption. The following was the resolution on this subject, which is reported to have been fully adopted:

Resolved, Unanimously, as the sense of this convention, representing the National Banks of the Northwest, that the proposed amendment to section thirty-two of the National Bank Act, as reported by the Hon. Mr. Hooper, of Massachusetts, which requires all the National Banks of the country to redeem their notes of Philadelphia, New York or Boston, meets our earnest and decided disapprobation. We believe the effect of such amendment, if substituted for the provision in the law as it now exists concerning redemptions, will be to seriously embarrass and impede the commercial and financial interests of the entire West and Northwest, by the forced concentration in the eastern cities of a very large portion of the means of the banks which the commercial necessities, especially of the West, required to be used at home. We can see no good reason for ignoring the great commercial centres of the West and Northwest in the manner proposed, and believe that the time has come when it is alike our interest and our duty to demand a recognition of the financial and commercial importance of our section of the country. We therefore earnestly remonstrate against that passage of the proposed amendment, and respectfully ask our Senators and Representatives in Congress to use their efforts to prevent any material alterations of the existing laws concerning redemption.

There is no doubt that it would be a great saving to the banks of the West if they could get their notes into general circulation in the rest of the country, without the expense of redemption in the great metropolitan centre. The advantage of this is seen at once when we reflect that the Western banks would thus get a loan without interest from the distant banks which hold their notes, and would be able to keep afloat a very large amount of currency in various localities where it might be a costly process to send it home. For everyone would prefer paying out these notes, instead of transmitting them across the country, at a great expense for express and insurance, from the far off source from which they were first emitted. Nothing is more evident than that if this non-redeeming plan were permitted to be established, an unfair advantage would be given to the notes of such obscure banks as are established in remote places, solely for the sake of "getting circulation," and of enabling the speculative firms in Wall street and elsewhere who own many of these institutions to make an illicit profit out of the National Banking law. It is for the interest of the whole country that all currency, whether consisting of bank notes or greenbacks, should be at par from Maine to Minnesota, and from the St. Lawrence to the Gulf. This can only be attained by making the bank notes redeemable in lawful money at New York, or, what is the equivalent, at

one of the three great cities; for everybody knows that a bank note which is at par at New York is at par everywhere else in the Union.

It cannot be denied that our National Banking system has, up to this time, worked better, has kept the financial movements of the country more steady, and has done less harm and more good than was believed possible by that large class of persons who advocated its passage as the least of two evils. In all probability it has saved us from one of the most formidable dangers of an era of paper money—that, namely, of unlimited issues of the notes of ill regulated, irresponsible State banks. The mischievous privileges granted to these old institutions to issue currency were apparently too firmly rooted to be curtailed, and too profitable to be given up. The banking interest in most of the states was so powerful as not to be made war upon with impunity. It did seem, therefore, as if we were doomed to have a currency defying all attempts to regulate its amount, and thus to control its value. Early in the history of our greenback system these difficulties were anxiously pondered, and the result was the elaboration of a banking scheme which provided for the absorption of the old banks, and the suppression of all currency-issuing privileges, except under the most strict conditions. It provides that the notes shall be secured by gold bearing bonds to an amount equal to 10 per cent. more than their face value. These bonds are held in the Department at Washington, and are so endorsed that they cannot be stolen or misappropriated by any dishonest officer of the Government. Hence there is an ample provision for the ultimate payment of the note, should the bank fail which has issued it. For it is clear that broken-bank notes are sure to be eventually paid in full so long as the securities which will be sold for that purpose are worth as much as ninety cents on the dollar. This method of securing a circulation of bank notes is infinitely to be preferred to the vicious plan, which obtained in some of the States, of allowing a bank to issue notes to more than double the amount of its capital, and this, in some cases, without exacting any adequate security. It is even better than the plan adopted for the Bank of England, for beyond the aggregate of sixteen millions sterling its notes are not represented by government securities at all. Here, then, is one of the most excellent features of our banking system. It controls and regulates the currency, by making it certain of ultimate payment in full.

But this is not enough. A note which is sure to be eventually paid is not fit to perform the functions of money, except the holder can get full payment for its face anywhere, at any time, and in any commodities he needs in the market. He must be sure that it will be accepted freely in liquidation of his debts. Bank notes, to be perfect as an internal currency, must be kept at par in every village and hamlet over the whole country. Prior to the war, we never had in this country a paper currency which was everywhere equal in value and negotiable without discount. These advantages we first enjoyed when greenbacks were issued, and the people prized them so highly that they will never again consent to be without them. If the National banks are unable to give us such a currency, they will place themselves under the necessity of giving up their functions as banks of issue altogether. But, we think, the National banks are able to keep all their notes at par. Experience shows us that, if the notes are redeemable in New York, and are thus kept at par here, they will be at par everywhere else.

But, on the other hand, if the notes are not redeemable here, they will be sometimes at a discount, as, indeed, was the case a few weeks ago. At this point it is that we find the most important defect in our system. The existing law does not provide for compulsory metropolitan redemption here. Fortunately for the system, a large proportion of the banks do redeem here. But they are not obliged to do so. And as it is more profitable for a speculative bank in an obscure far-off locality not to redeem here, lest its notes should come back to it too freely, there is a very large number of banks that do not redeem here nor (what is in effect the equivalent) in Philadelphia or Boston. As these institutions can keep out their notes longer than the redeeming banks, it is obvious that they obtain an unfair advantage—that our currency will have a tendency to become vitiated, by coming more and more from weak banks, and that the system naturally offers a premium to the non-redeeming institutions. Mr. Hooper, as is well known, introduced a bill into Congress last session, which was intended to remedy this fault, and in spite of the opposition with which it has met, it will no doubt be passed next session. We find the following very judicious remarks on the subject in yesterday's issue of a morning journal :

It is denied that the Western banks object to any system of par redemption for their notes, "they only object to being compelled to redeem in New York." This is a distinction without a difference. Of course each bank stands ready to redeem its notes when offered at its counter ; but neither that nor an arrangement for redemption in any Western city can make the notes at par throughout the country ; and this fact is as well known in Chicago as it is in New York. The talk in this connection about "paying tribute" to this city is perfectly ridiculous ; interior banks which do not redeem at par here are exacting tribute of New York, and this too when the privileges connected with their circulation will afford ample compensation without the levy of such a tax. There can be no system of par redemption, unless it secures the holders of the notes against their depreciation at the financial centre. To object, therefore, to a par redemption at New York, is to object to any system of par redemption, for no other arrangement will answer this purpose. If the issues in question were disbursed in legitimate business at the points where the several banks were located, and simply followed the law of financial gravitation to New York, there would be a sufficient reason why they should be redeemed here at par on their arrival by the banks which had received all the benefit of the circulation. The notes could then be taken home and again set afloat to renew their course. But it is still more the duty of the banks to provide against a possible redundancy of their issues when the notes are brought in whole packages and paid out here, and unless provided for at par are liable at once to become a charge upon this community. In urging the establishment of such a system we are consulting as much the well-being of all sound banks, wherever located, as any local interest. Unless this is done there can be no healthful circulation of the national currency ; and this principle, if not soon accepted, will vindicate itself ere long in the unavoidable experience of those most concerned.

As yet we have been regarding the banks as being simply banks of issue. But they are also banks of deposit and discount. They are the reservoirs of capital. To them our people lend their disengaged funds, and from them they borrow in time of need. It is easy to see how important it is that institutions which thus deal in credit should be placed ever under the scrutiny of the public. Such disgraceful failures as the Pennsylvania banks, or the Merchants' Bank at Washington, ought to be made impossible. Our system should be so arranged that an unsound bank should not be able to get the confidence of the people. If a bank depart from the rules of legitimate business, if it endanger its own stability and



the security of funds entrusted to its care, if it fails to maintain a due proportion between its liabilities and its available reserve, if it engages in speculation in stocks or produce—the public ought to have the means of discovering the fact. And as one of the means of informing the people, sworn statements of the bank's affairs should be published at very frequent intervals. Publicity is a safeguard against many of the evils of unsound banking, because it affords a means of quickly detecting them. The official examiner of the Bank Department has lately gone through the books of several of the banks of this city. But the fact has been enshrouded with a very unnecessary mystery, as if it were some government secret. Such official reports should be published, so far at least that the people may form their own judgment as to which are the soundest institutions and which are less worthy of trust. This question of increased publicity we would suggest to Mr. Hooper as eminently worthy of attention in the new law which he is to report early next session.

Reference was made just now to the necessity for ample reserves. The provision of the present National Currency Act requires every bank to keep a reserve of cash on hand equal in amount to 25 per cent of the aggregate of its circulation and deposits. A more sound and conservative arrangement it is impossible to contrive, and to its enforcement is in part due the stability and elastic promptitude with which our banking system has been able to respond to the emergency, whenever a panic or severe pressure has convulsed and thrown into temporary confusion the monetary relations of the country. Another circumstance which has contributed to this stability, is the virtual Union of the banks into one organized, complex whole. This union, however, has its dangers, and being of so intimate and vital a nature, it imposes the obligation on every sound bank to discourage the unsound ones, and to favor every arrangement which, like the redemption of the notes, or the enforcement of ample reserves, tends to give strength and stability to the whole organized system.

We give below the bank returns of the three cities. It will be seen that the specie in New York is at a lower point than ever before :

## NEW YORK CITY BANK RETURNS.

Date.	Loans.	Specie.	Circulation.	Deposits.	Legal Tend's.	Ag. clear'gs
Jan. 6, 1866...	\$233,185,059	\$15,778,741	\$18,588,428	\$195,482,254	\$71,617,487	\$570,617,323
" 13.....	231,938,193	16,852,568	19,162,917	197,766,999	73,019,957	608,082,837
" 20.....	239,337,726	15,265,327	20,475,707	198,816,248	72,709,892	538,949,311
" 27.....	240,407,896	13,106,759	20,965,883	195,012,454	70,319,146	516,323,672
Feb. 3.....	232,510,382	10,937,474	21,494,234	191,011,695	68,796,250	508,569,123
" 10.....	242,608,872	10,129,806	22,240,469	188,701,463	68,436,013	493,431,032
" 17.....	243,068,252	10,308,758	22,983,274	189,777,290	64,802,980	471,886,751
" 24.....	239,776,206	14,213,351	22,959,918	183,241,404	61,602,726	497,150,087
Mar. 3.....	235,339,412	17,181,130	22,994,086	181,444,378	58,760,145	526,539,959
" 10.....	233,068,274	16,563,237	23,033,237	180,515,881	64,341,802	504,204,912
" 17.....	233,517,378	15,015,242	23,303,057	185,438,707	68,402,764	579,216,500
" 24.....	231,500,518	13,945,651	23,243,406	185,868,245	69,496,033	593,448,864
" 31.....	237,316,099	11,930,392	23,736,534	188,554,592	72,158,099	529,240,640
Apr. 7.....	242,643,753	11,486,295	24,127,031	189,094,961	71,445,055	602,315,743
" 14.....	244,092,839	11,045,129	24,533,981	193,153,469	73,910,370	578,537,853
" 21.....	242,067,063	9,495,463	24,045,837	196,808,578	77,626,688	535,834,778
" 28.....	245,017,692	8,243,937	25,377,230	202,718,574	80,589,022	545,339,663
May 5.....	23,974,134	10,914,997	25,415,677	210,373,303	81,244,417	603,556,177
" 12.....	237,621,317	13,970,402	24,693,259	217,552,853	85,040,659	523,093,533
" 19.....	255,690,463	13,595,465	25,189,864	217,427,729	85,710,107	579,342,483
" 26.....	257,969,593	19,739,929	26,223,867	208,977,905	73,824,947	713,575,444
June 2.....	250,959,922	21,858,093	26,244,555	198,122,289	69,188,92	713,575,444
" 9.....	249,538,959	15,821,663	25,967,253	202,503,949	74,628,674	633,656,381
" 16.....	247,301,547	11,217,345	25,887,876	202,415,673	79,179,304	613,698,301
" 23.....	248,436,808	8,504,096	26,585,394	201,969,288	80,840,578	696,447,630
" 30.....	250,884,168	7,797,215	26,706,622	204,357,272	81,882,640	568,842,490

July 7.....	257,534,833	9,865,266	27,206,530	205,799,611	79,541,688	511,182,914
" 14.....	259,132,434	12,451,684	27,804,172	207,160,043	75,541,977	637,625,787
" 21.....	265,965,019	10,860,147	27,579,020	213,043,079	80,524,992	598,705,726
" 28.....	256,612,071	9,701,046	27,249,812	214,582,926	84,705,814	430,324,808
Aug. 4.....	256,808,717	9,448,900	27,311,549	214,156,705	86,235,079	523,246,814
" 11.....	253,263,063	8,424,209	27,528,622	214,232,263	86,861,834	494,810,975
" 18.....	261,951,934	7,545,513	27,796,904	214,310,576	84,800,071	554,655,346
" 25.....	265,901,065	6,884,077	27,958,464	218,119,450	86,283,483	617,950,350
Sept. 1.....	265,399,697	6,381,630	27,807,834	225,191,282	92,228,808	586,564,052
" 8.....	266,941,668	7,459,910	28,506,288	225,107,991	90,194,254	591,013,135
" 15.....	270,806,04	7,357,969	29,360,371	24,844,647	90,773,232	567,299,212
" 22.....	272,177,166	7,662,611	28,770,381	224,394,663	90,428,189	605,290,424
" 29.....	269,807,388	7,643,960	29,218,950	223,336,785	87,826,021	.....

The returns of the Philadelphia Banks have been as follows :

#### PHILADELPHIA BANK RETURNS.

Date.	Legal Tenders.	Loans.	Specie.	Circulation.	Deposits.
Jan. 2, 1866.....	\$17,181,229	\$45,941,001	\$890,822	\$7,226,369	\$25,342,304
" 8.....	17,236,320	46,774,150	983,685	7,319,528	36,618,004
" 15.....	17,267,412	47,350,428	1,007,186	7,357,972	36,947,700
" 22.....	17,052,559	47,254,622	1,012,980	7,411,237	36,214,653
" 29.....	16,244,277	47,607,558	1,008,825	7,429,534	35,460,881
Feb. 5.....	16,481,005	47,233,661	1,000,689	7,668,365	34,681,135
" 10.....	16,852,737	47,249,383	956,312	7,819,599	34,464,079
" 17.....	16,777,175	46,981,337	953,207	7,843,002	33,926,542
" 24.....	17,282,602	46,865,592	1,026,408	7,732,070	35,052,252
Mar. 3.....	17,447,635	46,604,752	1,041,392	8,171,049	32,835,094
" 10.....	17,292,534	46,546,878	1,055,694	8,248,100	32,504,504
" 17.....	16,375,008	46,690,788	1,026,068	8,438,164	32,102,427
" 24.....	15,969,814	46,642,150	981,932	8,580,200	32,144,250
" 31.....	15,954,832	46,043,488	990,690	8,666,290	32,257,653
April 7.....	16,622,233	46,028,641	946,282	8,720,270	32,762,280
" 14.....	18,323,759	45,114,699	949,116	8,743,396	31,640,861
" 21.....	18,660,513	45,762,733	936,876	8,761,213	35,448,953
" 28.....	18,949,719	46,832,734	890,241	8,779,166	36,032,862
May 5.....	19,144,660	48,006,654	912,023	8,794,348	36,987,007
" 12.....	19,646,263	48,236,256	896,741	8,930,420	38,414,588
" 19.....	19,648,232	48,336,567	897,913	8,918,938	37,296,645
" 26.....	19,715,093	48,036,984	867,094	8,988,742	37,078,418
June 2.....	21,154,909	47,564,996	890,121	9,022,553	38,189,566
" 9.....	21,568,085	48,118,897	859,633	9,007,515	38,326,034
" 16.....	20,568,591	48,616,145	897,381	9,219,553	36,972,476
" 23.....	21,105,316	48,166,814	899,999	9,290,094	36,715,308
" 30.....	21,455,836	48,266,904	863,454	9,325,475	37,242,979
July 7.....	20,546,695	48,892,594	866,981	9,431,664	38,275,788
" 14.....	21,311,668	49,493,405	852,783	9,442,146	37,707,667
" 21.....	21,312,705	49,009,316	849,770	9,427,361	37,575,560
" 28.....	20,922,377	48,935,067	826,096	9,382,473	37,270,855
Aug 4.....	20,293,826	49,682,529	825,978	9,516,724	37,244,034
" 11.....	20,060,536	49,164,321	835,158	9,543,472	36,639,226
" 18.....	19,863,685	48,530,454	811,230	9,566,783	36,942,311
" 25.....	20,414,323	48,591,763	807,071	9,575,534	36,025,288
Sept. 1.....	24,040,254	50,095,890	806,815	9,589,574	41,162,627
" 8.....	24,134,918	50,320,068	826,345	9,608,410	41,604,903
" 15.....	24,578,358	49,889,015	802,922	9,605,817	41,093,120
" 22.....	24,906,925	50,787,371	793,395	9,601,273	42,836,971
" 29.....	24,073,963	51,037,567	783,024	9,598,497	43,633,575

The returns of the Boston Banks are as follows :

#### BOSTON BANK RETURNS.

(Capital Jan. 1, 1866, \$41,900,000.)

	Loans.	Specie.	Legal Tenders.	Deposits.	Circulation	
					National.	State.
January 1.....	\$91,421,477	\$801,415	\$19,807,800	\$38,551,794	\$21,497,354	\$1,404,721
" 8.....	92,245,129	1,031,327	19,914,065	41,718,132	21,806,180	1,528,793
" 15.....	92,959,364	1,029,105	20,438,014	40,939,870	21,946,595	1,273,945
" 22.....	92,665,111	1,040,114	20,750,698	40,300,639	22,034,642	1,215,675
" 29.....	92,877,733	1,008,013	20,544,830	39,153,816	21,899,318	1,157,844
February 5.....	94,578,358	805,237	20,568,185	40,476,163	22,325,478	1,125,728
" 12.....	94,083,827	632,591	20,412,589	38,768,019	22,348,638	1,057,323
" 19.....	95,250,429	508,428	20,418,909	38,494,696	22,602,531	1,032,291
" 26.....	93,539,000	521,292	20,262,177	36,398,481	22,887,971	1,048,022

March	5.....	92,990,512	556,856	20,034,968	35,581,876	22,606,825	1,006,719
"	12.....	90,705,159	623,938	19,905,120	35,297,498	22,730,329	721,809
"	19.....	91,902,811	606,992	20,470,018	36,696,321	24,018,916	910,740
"	26.....	91,991,236	513,153	20,913,521	35,887,368	23,019,887	901,620
April	2.....	92,351,979	532,556	20,761,014	36,697,227	23,067,693	869,329
"	9.....	92,142,975	487,455	20,334,570	37,426,560	23,266,642	830,069
"	16.....	91,250,882	457,648	19,902,647	37,606,696	23,635,043	777,198
"	23.....	86,120,897	411,693	19,309,145	36,946,182	22,469,488	744,041
"	30.....	86,723,001	401,113	19,549,614	38,396,210	22,856,656	744,425
May	7.....	90,369,569	576,170	21,415,716	41,205,276	23,516,330	719,688
"	14.....	90,338,554	501,013	22,462,522	42,021,976	23,551,579	695,527
"	21.....	89,634,864	472,172	22,973,509	41,61,149	23,195,968	661,819
"	28.....	91,833,402	436,391	23,658,956	41,631,746	23,732,277	644,658
June	4.....	92,287,648	503,991	26,148,678	42,992,749	23,679,015	609,371
"	11.....	89,878,993	374,966	25,470,926	42,858,986	22,916,559	480,599
"	18.....	87,568,533	371,596	24,426,749	41,992,820	21,845,977	544,941
"	25.....	94,336,170	323,335	25,019,496	42,587,020	23,633,008	507,371
July	16.....	96,047,000	453,600	21,610,000	40,477,000	24,145,000	413,000
"	23.....	95,995,866	441,689	22,786,738	40,935,853	24,057,765	401,544
"	30†.....	95,002,698	363,776	22,242,659	39,770,363	23,804,526	355,864
August	6.....	96,672,749	318,779	22,482,317	40,549,379	24,116,795	380,980
"	13.....	95,771,749	295,241	21,101,481	39,192,630	24,101,577	292,734
"	20.....	94,915,075	333,670	20,817,159	38,619,847	24,290,816	368,163
"	27.....	94,819,253	323,083	21,688,693	39,028,518	24,262,817	363,405
Sept.	3.....	95,387,808	264,853	22,071,251	39,856,550	24,240,925	344,773
"	10.....	94,878,709	314,204	21,580,730	39,149,497	24,295,875	356,074
"	17.....	94,788,268	328,830	20,393,416	38,357,208	24,345,328	351,401
"	24.....	93,825,673	216,771	20,977,954	40,014,189	24,344,545	326,465
Oct.	1.....	93,676,388	277,806	21,037,880	42,095,214	24,238,047	343,408

\* No returns from National Bank of Redemption. † No returns from the Traders' Bank.

#### INTERNAL REVENUE INSTRUCTIONS—ARTICLE: EXEMPT FROM TAXATION.

The Internal Revenue Bureau has just issued instructions to the United States assessors concerning the exemption of articles and products from taxation under the 10th section of the act of July last, from which it appears that packing boxes, understood and taken on the technical and mercantile signification, are exempt, but packing boxes made of paper or other material than wood, except those made for friction matches, cigar lights, and wax tapers, are taxable. All dry barrels and casks, made water tight, are taxable, though not used for or intended to hold fluids alone.

The exemption of building stone applies only to the ordinary stones, and not to articles manufactured from stone, marble, or slate. The exemption of mouldings for looking glasses and picture-frames applies only to mouldings used for the purposes enumerated. The law does not exempt other mouldings nor looking glass or picture frames made from mouldings. These are subject to a tax of five per cent *ad valorem*, however made.

The exemptions under the head of printing paper of all descriptions, and tarred paper for wiping and other purposes, are confined strictly to these descriptions. Paper technically known as printing paper is exempt. All other kinds, whether writing paper, wrapping paper, drawing paper, paper hangings, blotting paper, felting paper, and the like, are taxable, and paper made for tarring if sold dry, is liable to a tax.

The exemption of flax and the manufactures thereof includes and carries all the exemptions of flax prepared for textile or felting purposes etc.; but a manufacturer who makes articles of dress for the wear of men, women, and children, from cloth of fabrics purchased in the markets, or purchased from the manufacturer thereof, is not entitled to exemption from tax.

A manufacturer who makes cloths, fabrics, or articles partly of flax and partly of other materials is not to be regarded as a manufacturer of flax, nor are such mixed products exempt from taxation.

Exemptions are to be construed literally. The exemption in the new law specifies only the hulls of ships and other vessels. Boats propelled by oars cannot be regarded as vessels, and are liable to a tax of five per cent. Iron drains and sewer pipes are exempt, but not gas or water mains or pipes. Medicinal and mineral waters are exempt, but not sarsaparilla, pop, root, and the like beer.

Cordage, ropes and cables, made of vegetable fibres, are taxable when not used as a part of the rigging or tackle of vessels.

Photograph albums are not regarded as books within the meaning of the excise law. They are liable to an *ad valorem* tax of five per cent. Photographs and other sun

pictures, when sold by the producer at wholesale at a price not exceeding fifteen cents each, or are used for the illustration of books, are exempt. All others are subject to an *ad valorem* tax of five per cent.

The exemption of the repairs of articles of all kinds does not extend to the material used in making repairs, when such materials are in themselves taxable manufactures. The exemption of car wheels, thimbles, skeins and pipe-boxes and springs, tires and axes made of steel, used exclusively for vehicles, cars or locomotives, is restricted in the material from which they are made, and in the uses to which they may be applied. They must be made of steel, and used exclusively for vehicles, cars or locomotives. The law exempts the finished umbrella and parasol, and also the sticks and frames made for the same, but the *handle* is declared by the Commissioner to be taxable.

By the tenth section of the act of July, the value of bullion used in the manufacture of wares, watches and watch cases, and bullion prepared for the use of platinum and watch makers, is exempt from internal tax. All bullion which is used by manufacturers is not therefore exempt from tax, but only such as is used and prepared under the provisions of the above-named section. Bullion used in the manufacture of jewelry is not exempt. Gold and silver rings, bracelets pins, charms, etc., are regarded as jewelry, but gold pens, thimbles, spectacle frames, etc., are regarded as wares. Yarn and warps are exempt from taxation when made and sold or used as material out of which are fabricated cloths or articles of wearing apparel for household or other uses, which cloths or other articles are liable to taxation under the provisions of section ninety-four. Manufacturers having on hand yarns or warps on which a tax has been paid are entitled to pay tax only on increased value, where the same are made into cloth, or fabrics or articles.

Wire, on which no tax has been previously paid as wire, is liable to a tax of five per cent. upon the price at which it is sold, whether that price is sixty cents, one dollar, or two dollar per pound. The law imposes a tax of five per cent *ad valorem*. The assessment of the tax must be at that rate. The amount of tax depends on the value of the wire.

Castings of iron of all descriptions not otherwise provided for are subject to a tax of three dollars a ton. The castings otherwise provided for are malleable iron castings, unfinished castings, made especially for locks, safes, looms, spinning machines, steam engines, hot air and hot water furnaces, and sewing machines, and castings for iron bridges. These castings, when not sold or used for any other purpose, and when a tax is assessed and paid on the article of which the casting is a part, are exempt from taxation. Castings of all descriptions made for articles, machines, or instruments, other than those specially enumerated, are liable to tax. The words "castings of all descriptions" include castings of brass and other metals, or combination of metals, as well as castings of iron. Woodenware, as used in the section of the new law, can only be construed to exempt such articles or implements of kitchen or household use as are made exclusively of wood, and technically known as woodenware, viz: Tubs, pails, chopping boards and trays, wooden plates, bowls, dishes, spoons, knives, ladles, rollers, pins, moulds, prints, mortars, pestles, dippers, ironing boards, pastry and meat boards, wash boards, clothes sticks, clothes horses, &c. &c. Other articles made of wood, such as churns, boxes, kegs, firkins, fish-kits, measures, saw-frames, ladders, pumps, &c., are liable to an *ad valorem* tax of five per cent.

#### COLLECTION OF THE COTTON TAX.—DECISION OF THE TREASURY AS TO RE-DISTRICTING THE SOUTH.

The following is the letter of the Attorney General with regard to re-districting the South so as to make the collection of the tax less oppressive.

ATTORNEY-GENERAL'S OFFICE, September 29.

Hon. Hugh McCulloch, Secretary of the Treasury.

SIR: I am in receipt of your letter of the 27th, requesting my opinion on the following point: Whether the laws imposing a tax on cotton and providing for its collection so restrict the executive authorities as to forbid the arranging of the cotton States into a single cotton district for the purpose of collecting the tax on cotton, having



reference to the cotton tax only, and without necessarily involving any change of districts which may be most convenient for the collection of other taxes. I am clearly of opinion that such a consolidation of the cotton-growing States as is described by the terms of the foregoing inquiry, into a single collection district for the purpose of levying and collecting the duties imposed by the Internal Revenue laws upon cotton, cannot lawfully be effected under the existing provisions of those laws. The authority conferred upon the President by the act of June 30, 1864, Section 7, to alter the respective collection districts as the public interest may require, enables him only to modify from time to time, as may be required, existing arrangements of the several districts designated by him for the levying and collection of all the duties and taxes prescribed and imposed by the acts of Congress relating to internal revenue. By the original act of July 11, 1862, the President was empowered simply to divide respectively the States and Territories of the United States, and the District of Columbia, into convenient collection districts. Soon after the passage of this act a question arose as to the authority of the President to alter the arrangement of collection district made and established by him in pursuance of this provision of law. That question was carefully considered by my predecessor, Attorney General Bates, who gave his opinion that the President when he made the original division of the States into collection districts exhausted his power in the premises, this was held on the general principle that where an act of Congress establishing a general system confers on the President the authority to do a specific act for the purpose of perfecting the means by which the system shall be carried into effect. The act of the President, when performed according to the terms of the statute, have all the validity and authority of the statute itself. (U. S. Opin., Bates, A. G., p. 384.)

This view of the law having been adopted by the Treasury Department, Congress was applied to for additional legislation conferring the authority, which was not contained in the original act. The 7th section of the act of June 30, 1864, was accordingly enacted to remedy the particular defect which was found to exist in the statute of 1862. It is too clear to admit of doubt that "collection districts," within the meaning of the act, are those districts respectively in which the internal duties and taxes imposed by law upon all the subjects of taxation are collected in the manner and by the officers designated in the statute. The districts cannot be established or arranged with reference to the duties imposed on particular subjects. That is not the plan upon which the internal revenue laws proceed. Such an arrangement as is proposed in the memorials which you have submitted to me should not be carried into effect with the machinery established by existing law for the collecting of internal duties. The President has no power to appoint a special collector for the tax imposed on the particular article of cotton, nor could he designate any one of the district collectors as the officer who should proceed throughout the entire cotton territory and collect the tax on that article wherever found. The mischiefs of the present system complained of by the Chambers of Commerce of Mobile and New Orleans can only be remedied by Congress.

The act of July 13, 1866, to which reference is made by the memorialist, contains all the exceptional provisions as to the tax on cotton which Congress deemed to be necessary, and those provisions, instead of giving authority to make the additional exception now requested, seem to me wholly inconsistent with it.

I have the honor to be, &c.,

HENRY STANBERRY, Attorney General.

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#### LETTER FROM SECRETARY McCULLOCH—A REVISION OF THE TARIFF.

The following letter of instructions has been addressed by the Secretary of the Treasury to Mr. Wells in regard to the proposed revision of the tariff at the next session of Congress. It is understood that the office of the Commissioner of the Revenue will be at the New York Custom-House during the month of October.

"WASHINGTON, September 10, 1866.

"To the Hon. David W. Wells, United States Commissioner of Revenue :

"SIR—In view of the fact that the revision of the tariff is certain to engage the attention of Congress at the next session, I consider it especially desirable that the

Treasury Department should be prepared to furnish as much information pertinent to the subject as can be obtained and collected within the limited time available for the necessary investigations. You are, therefore, hereby instructed to give the subject of the revision of the tariff especial attention, and to report a bill which, if approved by Congress, will be a substitute for all acts imposing customs duties, and which will render the administration of this branch of the revenue system more simple, economical and effective. In the discharge of this duty you will consider the necessity of providing for a large, certain, and permanent revenue, keeping in view the fact that the existing tariff has proved most effective in this direction.

"You will therefore endeavor, first, to secure for the Government a revenue commensurate with its necessities; and, secondly, to propose such modifications of the tariff laws now in force as will better adjust and equalize the duties upon foreign imports with the internal taxes upon home productions. If this last result can be obtained without detriment to the revenue by reducing taxation upon raw materials and the machinery of home production, rather than by increasing the rates of imports, it would, in my opinion, by decreasing the cost of production and increasing the producing power of wages, greatly promote the interests of the whole country. In the prosecution of this work, you are authorized to call upon any officer of the revenue for such information as you may require and he may be able to furnish. I am, with great respect, very truly yours,

"H. McCulloch, Secretary of the Treasury."

#### TELEGRAPH LAW OF THE UNITED STATES.

The following is an official copy of the act to aid in the construction of telegraph lines, passed at the late session of Congress, and approved by the President July 24:

**AN ACT** to aid in the construction of telegraph lines, and to secure to the Government the use of the same for postal, military, and other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That any telegraph company now organized, or which may hereafter be organized under the laws of any State in this Union, shall have the right to construct, maintain, and operate lines of telegraph through and over any portion of the public domain of the United States, over and along any of the military or post roads of the United States which have been or may hereafter be declared such by act of Congress, and over, under, or across the navigable streams or waters of the United States: Provided, That such lines of telegraph shall be so constructed and maintained as not to obstruct the navigation of such streams and waters, or interfere with the ordinary travel on such military or post roads. And any of such companies shall have the right to take and use from such public lands the necessary stone, timber, and other materials for the posts, piers, stations, and other needful use in the construction, maintenance and operation of said lines of telegraph, and may pre-empt and use such portion of the unoccupied public lands subject to preemption through which its said lines of telegraph may be located as may be necessary for its stations, not exceeding forty acres for each station; but such stations shall not be within fifteen miles of each other.

SEC. 2. And be it further enacted, That telegraphic communications between the several departments of the Government of the United States and their officers and agents shall, in their transmission over the lines of any of the said companies, have priority over all other business, and shall be sent at rates to be annually fixed by the Postmaster General.

SEC. 3. And be it further enacted, That the rights and privileges hereby granted shall not be transferred by any company acting under this Act to any other corporation, association, or person: Provided, however, That the United States may at any time after the expiration of five years from the date of the passage of this Act, for postal, military or other purposes, purchase all the telegraph lines, property, and effects of any or all of said companies at an appraised value, to be ascertained by five competent, disinterested persons, two of whom shall be selected by the Postmaster General of the United States, two by the company interested, and one by the four so previously selected.

SEC. 4. And be it further enacted, That before any telegraph company shall exercise any of the powers or privileges conferred by this Act, such company shall file their written acceptance with the Post master General of the restrictions and obligations required by this Act.

Approved, July 24, 1866.

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## THE BOOK TRADE.

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*Statistical Information Relating to Certain Branches of Industry in Massachusetts for the year ending May 1, 1865.* Prepared from official returns by OLIVER WARNER, Secretary of the Commonwealth. Boston: WRIGHT & POTTER, State Printers. 1 vol., 8vo., pp. 805.

This imposing volume, relating to the general industry of Massachusetts, has just appeared, and a copy has been sent to this office by the Hon. Oliver Warner, Secretary of that Commonwealth, under whose charge the information it contains has been collected and arranged. Like all Massachusetts State documents, its subject-matter is given in sufficient detail and in well-arranged form, attesting the importance the State authorities attach to the proper representation of their home-interests and businesses before the world.

The information contained in the volume was collected under an Act of the Legislature, approved April 24, 1865. This Act requires statistical details relating to no less than *two hundred and seventeen* different industries, which are specifically named in it, and the extent of enquiry into each (according to its importance) prescribed. This minuteness is remarkable in legislation, and, in connection with the result, shows how great care has been taken from first to last to furnish full and reliable statistics in relation to the industrial resources and wealth of the State.

The present report is the fourth of a series of such statistical publications referring to the manufactures and other productive interests of the Commonwealth. The first was made up in 1838, and showed the value produced in that year to have been \$86,000,000. The second issue referred to 1845, in which year the value is stated at \$124,000,000. In 1855, according to the third report, the production in that year is set down at \$295,000,000. The returns for 1865 (contained in the volume now referred to) show for that year the aggregate products of industry have attained the enormous value of \$517,000,000. Thus, we find that in less than thirty years the productive valuation has increased from 86 to 517, being six times as large in 1865 as it was in 1838. The increase from 1845 to 1855 was equivalent to 138 per cent., and from 1855 to 1865 equal to 75 per cent. The results of comparisons such as these cannot fail to strike the most casual observer. They indicate the ceaseless progress of the State in the development of its industries, and its march to wealth and influence in the nation. The results of the decade closing with 1865 are the more remarkable, since they were achieved within a period, during the latter part of which the country had been subjected to the strain of an exhausting war, when, of necessity, a large proportion of the classes usually employed in industrial pursuits changed from being producers to become consumers.

We will now exhibit a few of the results of the enquiries made in 1865. These may be stated thus—

Aggregate Capital invested.....	\$17,491,953
Persons employed (in agriculture 68,636, and in manufactures 271,431) .....	340,057
Value of products (more than \$1,500,000 a day).....	517,440,610

—facts well illustrating the indomitable perseverance of a people whose natural productions have been said to be only “ice and granite,” and whose industry, united with intelligence, has not failed to win substantial triumphs over the disadvantages of soil and climate.

The following statement shows the distribution of manufacturing values by counties :

Barnstable .....	\$6,090,022	Franklin .....	\$7,938,522	Norfolk .....	\$36,771,397
Berkshire .....	24,951,498	Hampden .....	28,016,816	Plymouth .....	17,632,246
Bristol .....	55,038,314	Hampshire .....	13,143,957	Suffolk .....	86,349,174
Duke's .....	545,310	Middlesex .....	83,102,442	Worcester .....	76,271,724
Essex .....	81,107,926	Nantucket .....	281,265		

The predominance of Suffolk, by far the smallest county of the State, comes from the large amount of clothing manufactured (\$15,186,183), the value of coastwise freights (\$9,242,643), &c.

A comparison of some of the leading products, as exhibited in the abstracts of 1855 and 1865, is here presented, which shows largely increased results with the single exception of the whale fisheries. The reduced number of hands employed in cotton and the boot and shoe interest, which is quite marked, will very probably be accounted for by the introduction of labor-saving machinery.

	—Hands.—		—Capital employed.—		—Value produced.—	
	1855.	1865.	1855.	1865.	1855.	1865.
Cotton .....	34,787	23,378	\$31,961,000	\$33,293,986	\$26,140,538	\$54,436,881
Calico and Delaine .....	1,157	4,308	1,980,000	4,222,000	5,213,000	25,258,708
Woolen .....	10,090	18,433	7,305,500	14,735,830	12,105,514	48,430,671
Paper .....	2,630	3,554	2,564,500	3,785,300	4,141,847	9,048,521
Knives and slit iron and nails .....	3,025	3,194	2,342,825	2,827,300	5,512,816	8,336,502
Printing and newsp. ....	1,134	2,409	749,550	1,919,400	1,351,318	5,358,148
Clotting .....	1,758	24,722	2,770,600	4,634,440	9,061,896	17,743,894
Tanning and currying .....	3,143	3,847	4,152,426	4,994,933	10,934,416	15,821,712
Boots and shoes .....	74,326	55,160		10,067,474	37,489,923	52,915,243
Whale Fishery .....	11,364	3,496	14,546,548	5,879,862	7,666,966	6,614,670
Mackerel and Cod Fishery .....	10,551	11,518	3,696,436	3,757,761	2,849,640	4,832,214
Horses, oxen and cows .....					15,423,521	19,154,798
Hay .....					8,702,317	13,195,270

In the manufacture of cotton, the following is the order of the counties : Bristol, \$11,836,681 ; Essex, \$11,707,241 ; Middlesex, \$8,909,439 ; Worcester, \$8,878,295 ; Hampden, \$7,354,880 ; Berkshire, \$2,964,200, and Hampshire, \$1,303,205. Barnstable, Nantucket and Dukes manufacture no cotton goods, and the others return under a million dollars each. It will be seen, therefore, that in this respect Bristol takes the lead.

In the manufacture of calicoes and delaines Essex returns the largest amount, \$9,329,439 ; next Bristol, with \$7,020,000 ; Middlesex, \$5,356,322 ; Worcester, \$1,853,692, and so on.

Worcester is the great woolen county, with a value of \$12,917,388 against \$7,859,826 in Middlesex, \$3,042,913 in Hampden, \$2,683,625 in Norfolk, \$11,450,818 in Essex, and \$6,726,025 in Berkshire. Worcester appears to be the leading county for the manufacture of shoddy, returning \$270,991 out of \$653,799 in the entire State. Berkshire and Plymouth are the two great pig



iron counties, the former manufacturing \$776,520, the latter \$748,275. Suffolk is ahead of all other counties in the manufacture of locomotives, steam engines and boilers, the value being \$3,414,000. Bristol comes next, with \$1,103,550.

In the manufacture of glass Barnstable is far ahead, with \$640,000. Suffolk is the first in the manufacture of hoop skirts, the value being \$257,768, with Norfolk next, \$112,500; the total value throughout the State was \$547,107. Essex is the leading boot and shoe county, manufacturing \$18,101,197; Worcester is next, with \$10,161,910; Middlesex follows with \$8,778,463; Norfolk, \$7,816,072; Plymouth, \$6,422,660. In the mackerel and cod fishery Barnstable stands undisputably the first, with a value of \$2,224,403 against \$1,684,052 in Essex.

In the whale fishery Bristol leads with \$6,057,469. Middlesex and Norfolk are the great brewery counties. Middlesex produces the large value of fruit, and Worcester of hay. The latter county is also the foremost in horses, oxen, cows, &c. In beef, pork, mutton, veal and swine Middlesex stands highest; also in milk. In fact, Worcester and Middlesex are two of the greatest agricultural as well as manufacturing counties of the State.

A few details respecting the more prominent industries will be appropriate:

**Cotton.**—Mills 214; spindles 1,913,756; hands 23,678, viz.: 8,892 males and 14,786 females; capital \$33,293,986; cotton consumed 46,686,250 lbs.; gross value of stock used \$49,683,919; cloth manufactured 167,655,364 yards, valued at \$46,554,041; yarn (not manufactured into cloth) 3,558,875 lbs., valued at \$3,794,758; cotton thread 283,053 lbs., valued at \$449,039; batting 952,327 lbs., valued at \$222,910; pelisse wadding 73,950 bales, valued at \$20,300; cotton flannels 3,210,570 yards, valued at \$1,562,258; quilts and counterpanes 42,247, valued at \$180,887; value of all other cotton manufactures \$1,652,688. Total value of manufactured cottons \$54,436,881.

**Calicoes and Delaines.**—Establishments 12; hands 4,208, viz.: 2,506 males and 1,702 females; capital \$4,222,000; and as follows: Calicoes printed 53,489,434 yards; delaines printed 28,617,679 yards, and goods bleached and colored but not printed 7,355,900 yards. The value of the calicoes printed was \$10,528,619 before and \$13,951,691 after printing, showing an increase from the operation of \$3,426,072, or about 33 per cent. The statistics of delaines and of bleached and colored goods are defective.

**Woolen Goods.**—Mills, 218; sets of machinery, 1,157; hands, 18,433, viz.: 9,583 males, and 8,850 females; capital, \$14,735,830; scoured wool consumed, 28,790,078 lbs.; gross value of stock used, \$35,374,296. Products, viz.: broadcloth, 3,457,702 yards (\$7,000,650); cassimeres, 15,412,242 yards (\$22,346,013); satinets, 6,471,642 yards (\$4,080,719); Kentucky jeans, 628,680 yards (\$754,686); flannel or blanketing, 20,037,875 yards (\$10,096,135); shawls, 577,556 (\$1,212,054); table and piano forte covers, 99,833 (\$208,035); wool yarn, 1,420,879 lbs. (\$1,037,828); and all other woolen goods, \$1,694,753. Total value, \$48,430,671.

**Clothing.**—Establishments, 601; hands, 24,722, viz.: 2,150 males, and 22,578 females; capital, \$4,630,440; stock used, \$11,092,434; product, \$17,743,894.

**Boots and Shoes.**—Hands, 55,160, viz.: 42,626 males, and 12,543 females; value of stock used, \$35,040,544; products—pairs of boots, 7,249,921, and shoes, 24,620,600; value of products, \$52,915,243.

With these selections, we close, recommending all persons interested in such matters to procure the volume and study its wonderful developments. It is one of those publications that will have a lasting value in American statistical literature.

*The Home Life; in the Light of its Divine Idea.* By JAMES BALDWIN BROWN, B.A., Minister of Clayland's Chapel, Clapham Road, London, &c. New York: D APPLETON & Co., 1866.

This author, an English independent clergyman, has attempted in a series of simple lectures to set forth the true Christian life in the several domestic relations. They may be perused with profit by all, and the council which they contain, though it may have been often reiterated, is still wholesome and not prudently disregarded.

*Appleton's Hand Book of American Travel.* By EDWARD H. HALL. New York D APPLETON & Co., 1866.

This book is all that it professes to be, a hand-book and guide through the Southern States, with maps and descriptive sketches of the cities, towns, waterfalls, battle-fields, mountains, rivers, lakes, watering places, summer resorts, scenes of interest, &c. It is carefully prepared, explicit; and to the tourist is an invaluable companion. It gives a brief outline description of the objects which he desires to understand, and enables him to make his journey interesting, because undertaken with intelligent ideas of the region which he is visiting.

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The following advertisements appear in our advertising pages this month:

### MERCANTILE.

Howard & Co.—619 Broadway—Diamonds, Watches, Holiday Gifts, etc.  
 Mercantile Library—Clinton Hall, Astor Place and Eighth St.  
 Julius Ives & Co.—49 Maiden Lane—Patent Lamps.  
 Ferdinand Korn—195 Fulton St.—Eau de Cologne.  
 Lewis Audendried & Co.—110 Broadway—Anthracite and Bituminous Coal.  
 J. C. Bull's Son—Soap and Candles.  
 Grover & Baker—495 Broadway—Sewing Machines.  
 A. B. Sands & Co.—139 and 141 William St.—Drugs.  
 Wm. Duryea, agent—165 Fulton St.—Maizena.  
 J. W. Bradley—97 Chambers St.—Hoop Skirts.  
 Stodart & Morris—684 Broadway—Pianos.

### BANKERS & BROKERS.

DeWitt, Kittle & Co.—88 Wall St.

Weiss, Fargo & Co.—84 Broadway.  
 Simon De Visser—52 Exchange Place.  
 Duncan, Sherman & Co.—Cor. Pine & Nassau.  
 L. P. Morton & Co.—35 Wall Street.  
 J. J. Cisco & Son—33 Wall St.  
 Robinson & Ogden—4 Broad St.  
 Howe & Macy—30 Wall St.  
 Gilmore, Dunlap & Co.—Cincinnati.  
 Lewis Johnson & Co., Washington.

### INSURANCE.

Marine—Atlantic Mutual Ins. Co.—51 Wall St.  
 Mercantile Mut. Ins. Co.—35 Wall St.  
 Orient Mutual Ins. Co.  
 Sun Mutual Ins. Co.—49 Wall St.  
 Great Western Insurance Co.  
 Fire—Hope Fire Ins. Co.—92 Broadway.  
 Morris Fire and Inland Ins. Co.—31 Pine.  
 Germania Fire Ins. Co.—175 Broadway.  
 Aetna Insurance Co.—Hartford.  
 U. S. Life Insurance Co.—40 Wall St.